

**Technical and Professional
Education**

**Curriculum Content Frameworks for
Criminal Justice**

**Curriculum Content Frameworks for
Criminal Justice
Developed by the
Department of Workforce Education**

**State of Arkansas
Department of Workforce Education**

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Preface

The Technical & Professional Education program continues to prepare students for employment and continuing education. To accomplish this preparation, teachers and employers have collaborated to modify individual programs to ensure that instruction is current and comprehensive. This document reflects essential competencies for program completers as well as all aspects of Criminal Justice as required by the Carl D. Perkins Act. The Curriculum Content Frameworks for all Technical & Professional Education programs can be accessed through the Department of Workforce Education Web site.

Foreword

The curriculum content framework Criminal Justice supports the course that prepares students for the following career roles, which in turn correspond to the CIP (Classification of Instructional Programs) codes listed below. The courses may be sequenced with a variety of career and technical courses to form a specialization to prepare students for careers and support additional education and training in the protective services industry.

- Career Family: Law & Public Safety
- Career Area: Criminal Justice & Corrections
- Career Role CIP Code:
- Security & Loss Prevention Services 430109
- Criminology 450401
- Corrections/Correctional Administration 430102
- Criminal Justice/Law Enforcement Administration 430103
- Criminal Justice Studies 430104
- Forensic Technology/Technician 430206
- Law Enforcement/Police Science 430107
- Para-legal – 22.0302
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The Criminal Justice curriculum content framework was produced by a team of program developers from the University of Arkansas at Little Rock. The framework was reviewed by a panel of experts in the field of Law Enforcement and Criminal Justice. The format and content of the framework reflect the specific training needs within the state of Arkansas. The framework content and format are modeled after a document originally developed by a writing team under the auspices of the Virginia Department of Education. Grateful appreciation is expressed to the Virginia Department of Education for granting the Arkansas Department of Workforce Education access to its instructional frameworks.

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Table of Contents

Introduction	7
Master Duty/Task List	
Master Duty/Task List for Criminal Justice.....	8
Duty/Task Definitions	
Introduction to Criminal Justice.....	17
Law Enforcement I.....	25
Law Enforcement II.....	44
Criminal Law.....	48
SkillsUSA Task Definitions	53
Related Arkansas Standards of Learning	
Introduction.....	58
Reading and Writing.....	62
Mathematics.....	71
Science.....	81
Crosswalk to SkillsUSA	97
All Aspects of Industry	99
Framework Cross Reference	103

Introduction

About the Program

The Criminal Justice program prepares students for careers in the public safety/protective services industry. The course sequence focuses on duties and tasks performed by professionals in law enforcement and corrections, as well as pre-employment and employment skills.

About the Document

This document includes the following components:

- Section 1 contains a master duty/task list for the Criminal Justice program.
- Section 2 contains an analysis of each task, consisting of the task, task definition, and process/skill questions to evaluate acceptable performance. All tasks have been designated essential. Essential tasks are those that must be achieved by every student pursuing the completion of the Criminal Justice program.
- Section 3 lists the Arkansas Standards of Learning for language arts, mathematics, and science that are reinforced by instruction in the Criminal Justice program. Academic skills in these areas are necessary for the mastery of a number of tasks performed by those in the Criminal Justice industry.

Program Description

Criminal Law: 47.155

Law Enforcement II: 47.156

Introduction to Criminal Justice: 47.157

Law Enforcement I: 47.158

Students learn the theory, principles, and techniques of developing, administering, and managing services for the safety and protection of people and property.

Master Duty/Tasks Listing
Introduction to Criminal Justice
Law Enforcement I
Law Enforcement II
Criminal Law

National and state experts in the occupational field of Criminal Justice have validated the duties and tasks in this section. Each is analyzed by identifying the following:

- a *duty/task statement*, which describes what the student is to do

DUTY A: INTRODUCTION TO CRIMINAL JUSTICE Introducing the Criminal Justice System
Task:
A001: Describe the elements of the criminal justice system
A002: Place the criminal justice system within the structure of the federal, state, and local governments
DUTY B: Exploring Search and Seizure
Task:
B001: Define <i>probable cause</i> , and explain how it can be established
B002: Demonstrate the procedures for obtaining and executing a search warrant
B003: Explain the conditions under which searches and seizures may be conducted
DUTY C: Arresting Suspects
Task:
C001: Identify the elements of probable cause to arrest
C002: Describe the elements that distinguish arrest from other police-citizen contacts
C003: Identify the constitutional right of a person placed under arrest
C004: Explain the proper procedure for searches during the course of an arrest

DUTY D: Exploring Court Procedures
Task:
D001: Identify the organizational structure and responsibilities of federal, state, and local courts
D002: State the purposes of bail, arraignment, preliminary hearing, indictment, and trial in a criminal case
D003: Define the roles of the judge, bailiff, prosecuting attorney, defense attorney, and jury
D004: Demonstrate professional demeanor as a witness in court
D005: Identify factors that influence the sentencing of convicted criminal defendants
DUTY E: Preventing Crime
Task:
E001: Define the elements of crime
E002: Identify the legal methods residents can use to protect their property
E003: Identify the legal methods that businesses can use to protect their property and ensure the safety of their personnel
E004: Identify methods individuals can use to defend or protect themselves from personal attack
E005: Identify local programs aimed at reducing crime in the streets, schools, or neighborhoods
E006: Identify the citizen's role in crime prevention
E007: Explore the responsibility of the student in hearing of potential danger and/or threats to other students or the school
E008: Discuss community policing

DUTY F: <i>LAW ENFORCEMENT I</i> Introducing the Criminal Justice System
Task:
F001: Follow general safety procedures
F002: Identify, use, and care for tools
DUTY G: Investigating Criminal Justice Careers
Task:
G001: Explain how criminal justice/corrections personnel can protect themselves from civil liability; include legal resources available to them
G002: Describe factors an officer must consider when faced with the use of deadly force
G003: Describe standards for physical fitness for all officers
DUTY H: Defining Crimes
Task:
H001: Differentiate between criminal, civil, and case law
H002: Differentiate between a felony and a misdemeanor, including traffic violations
H003: Describe the necessary elements of a crime
H004: Identify traffic codes and criminal violations, using the Arkansas Criminal Code
H005: Identify crimes against people and crimes against property
DUTY I: Defending Against Attack
Task:

I001: Define the elements of justifiable use of deadly force
I002: Describe the standards required for the handling and use of deadly weapons
I003: Demonstrate safety procedures in the handling of firearms
I004: Identify the basic principles of unarmed confrontation, including handcuffing, defenses against physical attack, and verbal defenses
DUTY J: Responding to Emergencies
Task:
J001: Identify the initial responsibilities of officers at the scene of a major accident or natural disaster
J002: Perform basic first aid
J003: Demonstrate CPR techniques
J004: Identify characteristics of various narcotics and controlled substances
J005: List symptoms associated with overdose and withdrawal from various narcotics and dangerous drugs
J006: Describe the procedures for operating an emergency vehicle
DUTY K: Controlling Traffic
Task:
K001: Describe the purpose and goal of traffic regulations
K002: Identify traffic infractions
K003: Describe the officer's roles in the enforcement of traffic laws and the investigation of traffic violations

K004: Explain the procedures for investigating possible cases of driving under the influence of alcohol (DUI) or drugs (DUID)
K005: Demonstrate proper techniques for traffic direction
K006: Demonstrate procedures for investigating a traffic accident
DUTY L: Performing Patrol Procedures
Task:
L001: Identify basic preventive patrol methods
L002: Describe observation techniques
L003: Give clear and concise descriptions of individuals, places, and incidents
L004: Describe techniques for vehicle stops
L005: Respond to oral and written requests
L006: Demonstrate effective telephone and radio techniques
L007: Discuss effective handling of domestic disputes
L008: Describe the importance of good communication skills to the success of a criminal justice officer
L009: Identify community resources/agencies to which citizens can be referred
L010: Identify high-risk situations an officer may face
DUTY M: Investigating Crimes
Task:

M001: Identify the types of information available through state and national crime information/communication systems
M002: Investigate the newest technology used by criminal justice officers
M003: Explain the vital role of computers in the officer's job
M004: Identify the investigating officer's tasks when working on various types of criminal cases
M005: Conduct an interview
M006: Write a report based on notes
DUTY N: Exploring Search and Seizure
Task:
N001: Define <i>probable cause</i> , and explain how it can be established
N002: Demonstrate procedures for obtaining and executing a search warrant
N003: Explain the conditions under which searches and seizures may be conducted
N004: Define <i>chain of evidence</i> , and explain its importance
DUTY O: Arresting Suspects
Task:
O001: Identify the elements of probable cause to arrest
O002: Describe the elements that distinguish arrest from other police-citizen contacts
O003: Identify the constitutional rights of a person placed under arrest

O004: Explain the proper procedure for searches during the course of an arrest
DUTY P: Maintaining Custody of Prisoners
Task:
P001: Describe the procedures for safe transport of prisoners
P002: Demonstrate the use of temporary restraints
P003: Outline the procedures for booking a prisoner into the jail or lockup
P004: Explain the concept of prisoner rights and its effects on the treatment of inmates
P005: Identify the minimum standards for local jails and lockups
DUTY Q: <i>LAW ENFORCEMENT II</i> Investigating Criminal Justice Careers
Task:
Q001: Describe standards for physical fitness for all officers
DUTY R: Defining Crimes
Task:
R001: Identify crimes associated with narcotics and controlled substances
R002: Identify crimes against children as defined by Arkansas law, including child pornography
DUTY S: Investigating Crimes
Task:
S001: Identify the investigating officer's tasks when working on various types of criminal cases

DUTY T: Exploring Search and Seizure
Task:
T001: Define <i>probable cause</i> , and explain how it can established
T002: Demonstrate procedures for obtaining and executing a search warrant
T003: Explain the conditions under which searches and seizures may be conducted
T004: Define <i>chain of evidence</i> , and explain its importance
DUTY U: Arresting Suspects
Task:
U001: Identify the elements of probable cause to arrest
U002: Describe the elements that distinguish arrest from other police-citizen contacts
U003: Identify the constitutional rights of a person placed under arrest
U004: Explain the proper procedure for searches during the course of an arrest
DUTY V: <i>CRIMINAL LAW</i> Exploring Search and Seizure
Task:
V001: Demonstrate procedures for obtaining and executing a search warrant
V002: Explain the conditions under which searches and seizures may be conducted
DUTY W: Arresting Suspects
Task:

W001: Identify the elements of probable cause to arrest
W002: Describe the elements that distinguish arrest from other police-citizen contacts
W003: Identify the constitutional rights of a person placed under arrest
W004: Explain the proper procedure for searches during the course of an arrest
DUTY X: Exploring Juvenile Justice
Task:
X001: Describe the scope of authority of the Juvenile Court of Arkansas
X002: Identify the constitutional guarantees affecting juveniles taken into custody
X003: Outline the stages of a typical juvenile case from arrest through adjudication
X004: Describe the purposes of various dispositions available to Juvenile Court
X005: Explain procedures for handling juvenile records

Task Definitions

National and state experts in the occupational field of Criminal Justice have validated tasks in this section. Each task is analyzed by identifying the following:

- a *task definition* (criteria for acceptable performance), which explains what the student has to do to perform the task at the expected level of mastery
- *process/skill questions*, which assess student knowledge and performance

Tasks are arranged by instructional duty area only. The placement of tasks into specific courses and the sequencing of tasks for instruction are local decisions based on student needs, employer demand, and school schedules.

DUTY A: INTRODUCTION TO CRIMINAL JUSTICE

Introducing the Criminal Justice System

Task:

A001: Describe the elements of the criminal justice system

Definition: Description should include the following:

- the elements of the American criminal justice system
- the primary purpose of each element
- the primary relationship among law enforcement, corrections, and the courts
- the purpose of the courts (to interpret the law and apply it to cases)
- the goals of law enforcement (to control and prevent crime)
- the roles of corrections (custody, control, and security versus rehabilitation)

Process/Skill Questions

- Why is an understanding of the elements of the criminal justice system a fundamental part of an officer's course of study?
- Why are the goals of law enforcement always the same?

A002: Place the criminal justice system within the structure of the federal, state, and local governments

Definition: Process should include the following:

- describe the three branches of the federal government and responsibilities of each
- describe the law enforcement agencies that operate under the executive branch of the federal government
- describe the branches of the state government and the place of law enforcement, courts, and corrections within that structure
- describe the organization of local government and the placement of criminal agencies in that structure
- describe the interrelationships among federal, state, and local criminal justice agencies

Process/Skill Questions

- Why are the responsibilities of the federal government divided?

- What are the advantages/disadvantages of a police department versus a sheriff's department for "full service" law enforcement needs?
- Why is it important for the agencies in the three branches of government to extend full cooperation to one another whenever possible?

**DUTY B:
Exploring Search and Seizure**

Task:

B001: Define *probable cause*, and explain how it can be established

Definition: Process should include the following:

- explain probable cause in lay terms
- explain the exclusionary rule and reasons for it
- explain ways probable cause is established
- discuss potential consequences of an illegal search
- explain the relationship between probable cause and obtaining search warrants
- explain the relationship between probable cause and searching without a warrant
- discuss the safeguards to unreasonable searches and seizure under the Fourth Amendment and related rulings
- discuss the placement of probable cause on a continuum of proof

Process/Skill Questions

- What is the exclusionary rule?
- What are the consequences of an illegal search?
- What is probable cause?
- How can probable cause be established?

B002: Demonstrate procedures for obtaining and executing a search warrant

Definition: Process should include the following:

- define *affidavit* and explain its purpose as related to search warrants
- explain when a search warrant should be obtained
- explain the use of force when carrying out a search, with a warrant, of a person
- describe the scope of a search without a warrant involving people, premises, and vehicles
- describe the articles that may be seized as a result of a search with a warrant
- explain and apply the meaning of *inadvertent discovery*
- explain the conditions under which individuals on the premises named on a warrant may be searched
- complete an affidavit, present an affidavit to a magistrate, search individuals identified on the warrant, search places or vehicles identified on the warrant, and seize appropriate items found during a legal search (practice through role-playing)

Process/Skill Questions

- What are the three things that must be named in an affidavit for a search warrant?
- Under what circumstances may a police officer with a valid warrant search a person?

- Under what conditions can a person who is not named on a warrant be searched?

B003: Explain the conditions under which searches and seizures may be conducted

Definition: Process should include the following:

- list the requirements for searching a person
- explain the scope of a search from incident to arrest
- describe three circumstances under which premises may be searched without a warrant
- describe property that may be reasonably seized during a search without a warrant
- describe a situation in which a vehicle may be searched without a warrant
- explain the concept of consent as it pertains to searches
- discuss the reasons when searches may be conducted during emergencies or after hot pursuit

Process/Skill Questions

- What are two emergency conditions under which an officer may search a premise?
- What are three reasons why a vehicle can be searched without a warrant?
- What are four conditions under which a police officer can stop a person in a public place?

**DUTY C:
Arresting Suspects**

Task:

C001: Identify the elements of probable cause to arrest

Definition: Process should include the following:

- explain the legal meaning of *probable cause* as it pertains to arrest
- discuss establishing probable cause for an arrest
- review five areas courts examine to judge the reasonableness of an officer's conclusions that probable cause for arrest exists:
 - officer's observation
 - other sources of information
 - patterns of criminal behavior
 - officer's training and experience
 - influences and investigative deductions made by officer

Process/Skill Questions

- How does the establishment of probable cause affect subsequent prosecution?
- What is the role of hearsay information in establishing probable cause?

C002: Describe the elements that distinguish arrest from other police-citizen contacts

Definition: Process should include the following:

- define *arrest* and *investigative detention*
- define *felony arrest*

- explain the rules of misdemeanor arrest, including assault and battery and shoplifting
- explain the use of force to affect arrest
- describe the difference between pat down (stop and frisk) and search
- explain the conditions under which a person being questioned must be advised of his or her rights

Process/Skill Questions

- When does voluntary conversation become an arrest?
- Under what conditions may force be used during an arrest?

C003: Identify the constitutional rights of a person placed under arrest

Definition: Process should include the following:

- discuss amendments/case laws, including Mapp vs. Ohio (1961), Terry vs. Ohio (1968), Escobedo vs. Illinois (1964), Miranda vs. Arizona (1966), and Gideon vs. Wainwright (1963)
- discuss exclusionary rule as it pertains to confessions

Process/Skill Questions

- What impact does the requirement of police to notify suspects of rights have on the number of crimes solved?
- Why should police be required to ensure that suspects are aware of their constitutional rights prior to questioning (“Mirandizing”)?

C004: Explain the proper procedure for searches during the course of an arrest

Definition: Process should include the following:

- list types of objects searched for during an arrest (weapon, evidence, contraband)
- list types of personal searches (cursory, field, and body)
- discuss proper techniques for searching males
- discuss proper techniques for searching females
- discuss proper techniques for standing, kneeling, and prone searches
- review principles and proper procedures for strip searches
- review principles and techniques for vehicle searches
- explain legal guidelines dealing with search incident to arrest

Process/Skill Questions

- How does the Fourth Amendment affect when and how a search incident to arrest is done?

**DUTY D:
Exploring Court Procedures**

Task:

D001: Identify the organizational structure and responsibilities of federal, state, and local courts

Definition: Process should include the following:

- define *courts of original jurisdiction, courts of limited jurisdiction, and appellate courts*
- review the structure of courts at each level of government in Arkansas
- explain the primary responsibilities of each court
- discuss examples of cases that are heard at each level of the system of appeals

Process/Skill Questions

- Why do appellate courts exist?
- What was the purpose for the development of the Arkansas Court of Appeals?

D002: State the purposes of bail, arraignment, preliminary hearing, indictment, and trial in a criminal case

Definition: Process should include the following:

- review the purpose of bail
- review the procedure of an arraignment
- review the purpose and procedures of a preliminary hearing
- review the difference between a petite and grand jury
- review the role of the grand jury in a criminal case
- discuss the purpose and procedures of trial

Process/Skill Questions

- What is decided in a preliminary hearing for a felony case?
- How is a grand jury selected?

D003: Define the roles of the judge, bailiff, prosecuting attorney, defense attorney, and jury

Definition: Process should include the following:

- explain the judge's duties at each level of the court system
- explain the bailiff's duties in court
- review the responsibilities of the prosecuting attorney
- review the responsibilities of the defense attorney
- list the duties of a civil, criminal, and grand jury
- review the responsibilities of a "jury of one's peers"
- review the duties and responsibilities of the prosecution vs. trial setting

Process/Skill Questions

- Who is the chief decision maker in the courtroom, and why is it important to have just one individual?
- What does it mean to be tried by a "jury of one's peers"?

D004: Demonstrate professional demeanor as a witness in court

Definition: Process should include the following:

- review standards for appearance and dress for officers testifying in court
- discuss language factors that influence the image of the police officer on the stand

- explain the importance of body language
- describe preparation for a court appearance

Process/Skill Questions

- Why is it important to be professional on the witness stand?
- How should an officer prepare for a court appearance?

D005: Identify factors that influence the sentencing of convicted criminal defendants

Definition: Process should include the following:

- discuss pre-sentence investigation
- explain judge’s discretion in sentencing and statutory mandates
- review types of sentencing (withhold findings, suspended sentence, incarceration, community service, etc.)
- explain concurrent vs. consecutive sentences
- discuss purposes for incarceration
- explain capital crimes

Process/Skill Questions

- Why are people sometimes executed for killing another human being?
- What is the purpose of sentencing guidelines?

**DUTY E:
Preventing Crime**

Task:

E001: Define the elements of crime prevention

Definition: Process should include the following:

- define *anticipation, recognition, appraisal* and *action*
- distinguish the difference between the active and reactive roles of the police in crime prevention
- discuss the desired results of anticipating crime through crime analysis
- explain reasons for not reporting some crimes
- review the importance of cooperation between police and the community in implementing a plan of action for crime prevention
- develop a plan to reduce the opportunity and risks for a crime to be committed
- give an example of a crime triangle of desire, ability, and opportunity and the impact of removing one or more of these elements.

Process/Skill Questions

- What is the importance of proactive policing?
- Why are the three factors in the crime triangle important to crime prevention?

E002: Identify legal methods residents can use to protect their property

Definition: Process should include the following:

- review security hardware used to protect a home from illegal entry
- list alarm systems
- review neighborhood crime-prevention programs
- discuss lighting and landscaping options used to reduce criminal opportunity
- describe personal property identification and inventory
- examine procedures for firearms or other weapons in the home

Process/Skill Questions

- What methods of crime prevention do you practice in your own home?
- What methods of crime prevention does your neighborhood practice?
- What changes could you make in both your home and your neighborhood to prevent crime?

E003: Identify legal methods businesses can use to protect their property and ensure the safety of their personnel

Definition: Process should include the following:

- list the types of security alarm systems used by various businesses
- review legal methods of deterring shoplifters
- describe businesses that traditionally have been vulnerable to robbery and discuss ways to lessen this vulnerability
- Identify crimes associated with the commercial sector, such as robbery, burglary, vandalism, arson, shoplifting, and employee theft
- list the responsibilities of a security guard
- discuss management's philosophy of asset protection

Process/Skill Questions

- What methods of crime prevention are used in area businesses?
- What are the typical job descriptions of loss-prevention officers and security officers?

E004: Identify methods individuals can use to defend or protect themselves from attack

Definition: Process should include the following:

- describe legal and appropriate ways private citizens can use to defend or protect themselves
- suggest safety procedures for traveling at night, both on foot and by car, in a city or in a rural area
- suggest ways private citizens can discourage attack or defend themselves
- discuss ways to teach younger children how to protect themselves from attack by adults
- discuss ways to summon emergency police assistance in various situations and environments
- discuss laws pertaining to use of deadly force by private citizens

Process/Skill Questions

- What are common self-defense techniques taught to children?

- Why must a private citizen be aware of his rights *and* his liabilities in defending himself from attack?

E005: Identify local programs aimed at reducing crime in the streets, schools, and neighborhoods

Definition: Process should include the following:

- study a variety of Neighborhood Watch programs
- review police programs that protect children (i.e., photograph/fingerprint services)
- discuss local programs for prevention and treatment of drug abuse
- list local programs providing employment and education
- describe victim/witness coordinators positions
- describe counseling services for juveniles and families
- review security survey assistance
- describe school Resource Officer/DARE officer role

Process/Skill Questions

- What can a private citizen do to support crime-prevention programs in his/her community?
- Why is it important to have police officers involved in public schools on a daily basis?

E006: Identify the citizen's role in crime prevention

Definition: Process should include the following:

- The citizen's role should include cooperation with police, input to police, financial support of police, and involvement in the community

Process/Skill Questions

- What types of assistance should the citizen be willing to offer police?
- What would be the result if the community did not support the police?

E007: Explore the responsibility of the student in hearing of potential danger and/or threats to other students or the school

Definition: Process should include the following:

- discuss notification of an appropriate adult—teacher, counselor, or administrator
- explain the importance of responding to any situation in which a student is bullied

Process/Skill Questions

- Why does the student have a responsibility in helping to avoid danger in the schools?
- Why should the student go to an adult with his concerns as soon as possible?

E008: Discuss community policing

Definition: Process should include the following:

- study partnerships between police and citizens
- describe methods of patrol that feed community policing

- review the history and philosophy of community policing

Process/Skill Questions

- What can a citizen do to improve community-policing practices?

DUTY F: LAW ENFORCEMENT I
Introducing the Criminal Justice System

Task:

F001: Follow general safety procedures

Definition: Safety procedures include the following:

- safe handling of all weapons and ammunition
- proper use of infectious disease barriers (gloves, masks, face shields)
- proper disposal of blood-borne pathogen contaminated items
- safe handling of suspected narcotics
- safe handling of transportation/patrol vehicles—cars, boats, bicycles, motorcycles, helicopters, planes, prisoner transport vans

Process/Skill Questions:

- What is the importance of proper handling of weapons?
- What are the medical/legal issues involved in blood-borne pathogens or infectious diseases?
- What are the medical/legal issues involved in handling narcotics?

F002: Identify, use, and care for tools

Definition: Identification should include the following types of equipment:

- handcuffs, weapons, map books, traffic templates, whistle
- code books, cameras, fingerprint powder, computers
- various types of patrol vehicles, armored personnel carriers, boats, and bikes

Process/Skill Questions

- Why is proper use and care of equipment a basic part of an officer’s training?
- What are some possible consequences of improper use and care of equipment?

DUTY G:
Investigating Criminal Justice Careers

Task:

G001: Explain how criminal justice/corrections personnel can protect themselves from civil liability; include legal resources available to them

Definition: Process should include the following:

- review the Eighth Amendment
- define the concept of *vicarious*, or *third party, liability*

- discuss why police and corrections officers can be held liable for their actions under civil law
- discuss administrative actions a police department may take against an officer who violates policy
- describe various types of awards issued by the courts to plaintiffs
- discuss differences between Section 1983 and tort suits

Process/Skill Questions

- What amendment guarantees citizens the right to sue government representatives for violating their rights or causing them injury?
- Why are police and corrections officers civilly liable for their actions?
- What are two primary defenses to a tort suit?
- What are three types of court rulings for the plaintiff in a civil suit?
- What is the major difference between Section 1983 and tort suits?
- What is meant by punitive damages?

G002: Describe factors an officer must consider when faced with the use of deadly force

Definition: Process should include the following:

- discuss factors of ability, opportunity, imminent danger to an officer or third party, and preclusion
- explain six escalating levels of response available to the police officer, beginning with officer presence and continuing through verbal commands, control restraint, chemical agents, temporary incapacitation, and deadly force
- discuss why a police officer must have reasonable belief that a violator has both the ability and the opportunity to cause great bodily harm or even to kill
- view and discuss videotaped situations in which the officer must make split-second decisions about whether to fire a weapon

Process/Skill Questions

- What are the four questions a police officer must answer “yes” to before using deadly force?
- What criteria might an officer use to decide on a level of response?
- What is *imminent danger*?

G003: Describe standards for physical fitness for all officers

Definition: Process should include the following:

- list the types of physical training to prepare for the employment process
- list the types of physical training to follow *after* employment with a particular agency
- discuss the importance of physical fitness for law enforcement or correctional officers

Process/Skill Questions

**DUTY H:
Defining Crimes**

Task:

H001: Differentiate between elements of criminal, civil, common, and case law

Definition: Process should include the following:

- discuss the elements of criminal law, including common law vs. statutory law, intent and remedies, “spirit of the law” vs. “letter of the law,” and standard of proof
- review civil law, including tort, breach of contract, and standard of proof
- discuss case law, including precedents and decisions affecting statutory law

Process/Skill Questions

- What are the differences between common law and statutory law?
- What impact does the use of “spirit of the law” and “letter of the law” have on public relations?
- What is a precedent and how does it affect and/or clarify statutory law?

H002: Differentiate between a felony and a misdemeanor, including traffic violations

Definition: Process should include the following:

- review the legal definitions of *felony* and *misdemeanor*
- discuss the classes of felonies and misdemeanors
- explain how some crimes can be felonies or misdemeanors

Process/Skill Questions

- What are some examples of a felony?
- How is each example punishable and what class is it?
- What are some examples of a misdemeanor?
- How is each example punishable and what class is it?

H003: Describe the necessary elements of a crime

Definition: Process should include the following:

- define three elements of a crime (*mens rae*, conduct or criminal act, concurrence)
- review action vs. omission of an action (negligence)
- discuss general vs. specific intent, including transferred intent

Process/Skill Questions

- What are the three elements of a crime?
- When there is an omission of an action, what type of crime can occur?
- How can intent be transferred?

H004: Identify traffic codes and criminal violations, using the Arkansas Criminal Code

Definition: Process should include the following:

- use the code book to look up a code by definition and code number

Process/Skill Questions

- Who is responsible for interpreting the Code of Arkansas?
- What consequences may arise from citing a crime by the wrong code number?

H005: Identify crimes against people and crimes against property

Definition: Process should include the following:

- define *crime against a person*
- define *crime against property*
- provide examples of crimes against a person/property
- define *felony* and *misdemeanor* crimes

Process/Skill Questions

- Why is it important to know the elements of each crime?
- Do you think that certain crimes should be changed from misdemeanors to felonies and vice versa?

**DUTY I:
Defending Against Attack**

Task:

I001: Define the elements of justifiable use of deadly force

Definition: Process should include the following:

- discuss the legal relationship between fear of bodily harm and use of deadly force
- review tests under the law that justify use of deadly force to defend another person
- review conditions under which an officer may use deadly force to prevent a serious felony
- examine actual case studies and debate whether the officer was legally justified in using deadly force
- compare the right of police and other protective services officers to use deadly force with the right of an ordinary citizen to defend himself or herself

Process/Skill Questions

- What are the legal ramifications involved in the use of deadly force?
- What are the personal ramifications or effects on the officer involved of the use of deadly force?

I002: Describe the standards required for the handling and use of deadly weapons

Definition: Process should include the following:

- define *deadly weapons*
- list the nomenclature of each part of a standard revolver, semi-automatic handgun, and pump shotgun
- review standard procedures for unloading and loading weapons
- review standard procedures for cleaning, storing, and transporting weapons
- discuss principles of good marksmanship in the use of firearms

- list qualification requirements for marksmanship in the use of handguns and shotguns
- compare qualification courses
- review the difference between day- and night-fire qualification

Process/Skill Questions

- Why is it important for an officer to know the standards for handling a deadly weapon?
- Why should an officer review these standards often?

I003: Demonstrate safety procedures in the handling of firearms

Definition: Process should include the following:

- load and unload a weapon
- demonstrate shooting positions
- draw and holster a handgun, using proper procedure
- clean a weapon according to standard procedure
- store weapons as directed

Process/Skill Questions

- Why should an officer be trained in safety procedures involving firearms?
- Why is it so important for the officer to clean his firearm properly?

I004: Identify the basic principles of unarmed confrontation, including handcuffing, defenses against physical attack, and verbal defenses

Definition: Process should include the following:

- discuss the value of defensive tactics training
- review the potential for personal and agency liability related to the use of force
- list the fundamental rules of weaponless control
- use basic principles of body mechanics to the advantage of the defender
- demonstrate methods of disarming an aggressor
- list areas of the body vulnerable to nondeadly force
- list parts of the body used to overcome resistance
- discuss signs of potential aggression in a suspect
- demonstrate the techniques used on vulnerable areas of the body to control, subdue, or restrain an aggressor
- demonstrate control holds
- demonstrate “take-down” tactics

Process/Skill Questions

- Why should an officer be trained in handling unarmed confrontation with an aggressor?
- What are four of the best methods to use?

**DUTY J:
Responding to Emergencies**

Task:

J001: Identify the initial responsibilities of officers at the scene of a major accident or natural disaster

Definition: Process should include the following:

- explain the procedures that should be followed before arrival at the scene
- review signs of dangerous or hazardous situations at the scene of an accident
- discuss the procedures for rescuing and caring for the injured
- explain emergency evacuation procedures
- explain how to protect evidence at the scene of an accident
- practice initial interviewing of witnesses to an accident

Process/Skill Questions

- What is an officer's first priority at a major accident or natural disaster?
- What are some signs to identify dangerous or hazardous situations at a scene?
- What are some emergency evacuation procedures?

J002: Perform basic first aid

Definition: Process should include the following:

- demonstrate industry-approved response to minor cuts and puncture wounds, strains and sprains of limbs, head injuries, back or neck injuries, burns, shock, and animal and insect bites

Process/Skill Questions

- How do citizens obtain emergency medical assistance in your locality?
- What are the contents of a standard first-aid kit?
- What is the purpose of the contents of the kit?
- What are the symptoms of shock?
- What universal precautions should be taken by first-aid providers?

J003: Demonstrate CPR techniques

Definition: Process should include the following:

- perform techniques to determine if victim is breathing
- identify symptoms of choking
- demonstrate the Heimlich maneuver
- perform steps of one- and two-person CPR
- demonstrate the difference between CPR for adults and small children
- identify potential injuries inflicted by CPR techniques

Process/Skill Questions

- What are symptoms of choking?
- What are some injuries inflicted by CPR techniques?
- What legal and ethical consequences may result from performing CPR and refusing to perform CPR?
- What is the difference between CPR for adults and CPR for children?

J004: Identify characteristics of various narcotics and controlled substances

Definition: Process should include the following:

- review characteristics of each narcotic and a description of its forms, uses, and how it affects the user
- define two types of heroin, how they are processed and packaged, and how they may be taken
- list common examples of narcotics other than heroin, such as Dilaudid, opium, morphine, codeine, Demerol, methadone, and Percodan
- review common examples of depressants (methaqualone, barbiturates, and tranquilizers), any legal uses, and a description of their effects on the body
- discuss effects of cocaine and derivatives such as crack on the body

Process/Skill Questions

- What are examples of hallucinogens (LSD, mescaline, psilocybin, PCP)? What are their effects on the mind?
- What is the element of cannabis that creates the “high”?
- What are the different ways marijuana may be ingested and its effects on the body?

J005: List symptoms associated with overdose and withdrawal from various narcotics and dangerous drugs

Definition: Process should include the following:

- define *addiction* and differentiate between physical and psychological addiction
- list effects of an overdose of narcotics, depressants, stimulants, and hallucinogens
- list effects of withdrawal from narcotics, depressants, stimulants, and hallucinogens
- identify local programs for prevention or treatment of drug abuse

Process/Skill Questions

- What is physical addiction?
- What is psychological addiction?
- What is the name of a local program for treatment of drug abuse?
- What is the name of a local program for the prevention of drug abuse?

J006: Describe the procedures for operating an emergency vehicle

Definition: Process should include the following:

- identify components of *defensive driving*
- discuss speed vs. safety in emergency situations
- explain the use of emergency equipment such as the siren and emergency lights
- explain laws related to the operation of emergency vehicles

Process/Skill Questions

- Under what conditions do officers respond with emergency equipment?
- Under what condition do officers respond with no emergency equipment?

**DUTY K:
Controlling Traffic**

Task:

K001: Describe the purpose and goal of traffic regulations

Definition: Process should include the following:

- discuss the purposes and goals, including regulation of traffic, reduction of accidents, and promotion of voluntary compliance

Process/Skill Questions

- What are the potential results of non-enforcement of traffic laws?
- What technological innovations might advance the purposes and goals of traffic regulations?

K002: Identify traffic infractions

Definition: Process should include the following:

- review commonly used regulations from the Arkansas Code
- discuss infraction, moving violation, license, registration, and Arkansas uniform summons

Process/Skill Questions

- What are the purposes of having and enforcing traffic regulations?
- What might happen in the absence of traffic regulations?

K003: Describe the officer's roles in the enforcement of traffic laws and the investigation of traffic violations

Definition: Process should include the following:

- explain commitment to public safety
- discuss discretion used in traffic enforcement (warning, summons, arrest)
- display proper attitude when making a traffic stop

Process/Skill Questions

- How does a "commitment to public safety" relate to an officer's role in traffic enforcement?
- What kinds of information does an officer look for when stopping a vehicle for a violation or suspected violation?
- What hazards does an officer face when approaching a vehicle stopped for a traffic citation?

K004: Explain the procedures for investigating possible cases of driving under the influence of alcohol (DUI) or drugs (DUID)

Definition: Process should include the following:

- Explain DUI and DUID
 - state laws regarding DUI (adult vs. juvenile)

- signs of DUI vehicle operation
- observable clues of DUI during a traffic stop
- pre-exit sobriety tests and field-sobriety tests
- preliminary Breath Test Law and alco-sensor
- Implied Consent Law regarding breath and blood tests for blood alcohol content (including consequence if not taken)
- Breathalyzer test and legal aspects of its use

Process/Skill Questions

- Why is the BAC limit lower for juveniles than for adults?
- What is the importance of strict enforcement of DUI laws?
- If someone refuses to consent to have his or her blood taken, can he or she still be charged with DUI?

K005: Demonstrate proper techniques for traffic direction

Definition: Process should include the following:

- explain the purpose of traffic direction
- explain laws that regulate law enforcement direction of traffic
- discuss physical/civil risks involved
- review safety procedures and equipment
- demonstrate the correct use of arm, hand, and whistle signals needed to establish a smooth flow of traffic

Process/Skill Questions

- If an officer fails to direct traffic in a safe manner, what can the consequences be?
- Under what circumstances should an officer take charge of directing traffic?
- What are the differences between day and night traffic directions?

K006: Demonstrate procedures for investigating a traffic accident

Definition: Process should include the following:

- explain the purpose of the investigation
- identify laws pertaining to accident investigation
- establish priorities at the scene
- demonstrate correct methods of interviewing witnesses/drivers
- use correct note taking
- review evidence-collection techniques (including types of evidence to look for)
- complete an accident report

Process/Skill Questions

- How does an officer determine fault at an accident scene?
- What are the possible consequences of poor note taking?

**DUTY L:
Performing Patrol**

Task:

L001: Identify basic preventive patrol methods

Definition: Process should include the following:

- define *preventive patrol*
- explain basic assumptions behind police patrol (visibility of police, quick response to calls, and increased public cooperation with familiar police personnel)
- explain the advantages and disadvantages of foot patrol vs. squad car patrol
- discuss the factors that influence how patrol is structured (staffing, geography, calls for service, and citizen input)
- discuss the effectiveness of one-officer vs. two-officer squad car patrol

Process/Skill Questions

- How does preventive patrol prevent crime?
- What are the advantages of two-officer patrol?

L002: Describe observation techniques

Definition: Process should include the following:

- discuss how a patrol officer's "sixth sense" can alert him/her to unusual conditions
- review perception, observation, training, and experience and how they combine to give the officer this "sixth sense"
- discuss how each of the five senses can be used to heighten perception in various situations
- describe how an officer's education, training, experience, and prejudices affect the accuracy of perception
- list environmental factors (distance, lighting, movement, and time) that can affect perception
- review how high stress can affect perception and the techniques for reducing temporary instances of high stress
- list techniques that can be used to increase perception or observation skills

Process/Skill Questions

- How can observation techniques determine an officer's success on patrol?
- How can stress affect an officer's observation techniques?

L003: Give clear and concise descriptions of individuals, places, and incidents

Definition: Process should include the following:

- describe techniques for effective observation of incidents
- describe techniques used for accurately describing individuals and locations
- review the importance of accurate and concise descriptions
- provide examples of clear and concise descriptions of vehicles

- use crime-scene note taking techniques
- describe techniques used for taking an accurate crime-scene sketch

Process/Skill Questions

- What is the importance of getting and disseminating clear and accurate descriptions?
- Why are accurate crime-scene notes and sketches important to follow up an investigation and subsequent prosecution?

L004: Describe techniques for vehicle stops

Definition: Process should include the following:

- review the three types of vehicle stops: traffic, investigative, and felony
- discuss safety precautions related to vehicle stops
- describe radio and written communication during vehicle stops
- review procedures for stopping a vehicle
- discuss maintaining “courteous authority” by the officer during vehicle stops
- list the general principles of felony stops

Process/Skill Questions

- Why is a citizen’s perception of law enforcement often based on the officer’s behavior during a traffic stop?

L005: Respond to oral and written requests

Definition: Process should include the following:

- Explain the types of requests for assistance a patrol officer might receive from members of the community
- Explain the difference between requests and orders
- Demonstrate the ability to follow written instructions

Process/Skill Questions

- Why does an officer need to be cognizant of the types of requests s/he might receive?
- What criteria might officers use to decide the legitimate nature of a request?

L006: Demonstrate effective telephone and radio techniques

Definition: Process should include the following:

- use correct procedures for answering the telephone and taking non-emergency messages
- use correct procedures for emergency telephone and radio calls
- use correct radio procedures

Process/Skill Questions

- What is the importance of effective telephone and radio techniques?

L007: Discuss effective handling of domestic disputes

Definition: Process should include the following:

- review officer safety

- discuss how to take control of the situation
- describe how to separate parties
- determine who is the victim/aggressor
- use proper procedures for arrest and emergency protective orders
- show knowledge of domestic violence statutes
- list community agencies that can assist parties in a domestic dispute
- use techniques for defusing dispute situations
- review factors that determine domestic assault

Process/Skill Questions

- What danger does an officer face when s/he answers a domestic dispute call?
- What are the community agencies in your community that provide services to victims of domestic disputes? What services do they offer?

L008: Describe the importance of good communication skills to the success of a criminal justice officer

Definition: Process should include the following:

- maintain a good image of the individual officer
- maintain a good image of the agency
- review the importance of good interpersonal relationships among officers and the public
- discuss verbal and nonverbal messages

Process/Skill Questions

- How should an officer communicate with hostile, hysterical, intoxicated, mentally ill, or very young/old people? (Use role-playing.)
- What criteria should be used to evaluate communication skills?
- What resources are available to help officers improve communication skills?

L009: Identify community resources/agencies to which citizens can be referred

Definition: Process should include the following:

- list the type of problem the individual faces
- list the type of agencies available (private/public)
- list the types of assistance offered (general information, counseling, financial, transportation)

Process/Skill Questions

- Why do citizens contact police with requests for assistance that are not crime-related?
- How can providing information on resources to the public be helpful to future investigations?

L010: Identify high-risk situations an officer may face

Definition: Process should include the following:

- discuss possible high-risk situations (crimes in progress, alarms, domestic disputes, disasters, and ambush)

- review factors for officer survival (positive attitude, anticipation of danger, plan of action, good physical condition, maintenance of equipment)
- describe an effective initial response
- review procedures for handling various high-risk situations

Process/Skill Questions

- What is the importance of mental preparation and preplanning in handling high-risk situations?
- How should you handle an ambush, crime in progress, or disaster situation? (Use role-playing.)
- What are the current statistics on officer injuries? How and when do most assaults occur?

**DUTY M:
Investigating Crimes**

Task:

M001: Identify the types of information available through state and national crime information/communication systems

Definition: Process should include the following:

- compare FBI with the State Police
- review how to research criminal history
- review how to accomplish a warrant check
- describe how to determine stolen status
- describe how to research missing persons/runaways

Process/Skill Questions

- How do the NCIC and ACIN systems assist criminal justice personnel?
- What is the role of non-agency sources of information? (Sources include victims, witnesses, concerned citizens, informants, relatives, employers, or associates of suspects.)

M002: Investigate the newest technology used by criminal justice officers

Definition: Process should include the following:

- describe inkless fingerprinting
- review crime scene investigation tools (DNA, lasers, etc.)
- discuss the use of radar units (lasers, multiple-vehicle tracking, aircraft monitors)
- review computers (including those used in jail-management systems, case-management systems, etc.)
- use the Internet (for information searches, i.e., gang cultures and how they relate to criminal activity)

Process/Skill Questions

- How does new technology assist criminal justice professionals?

- Give several examples of how the newest technology has changed the nature of criminal justice.

M003: Explain the vital role of computers in the officer's job

Definition: Process should include the following:

- review the computer's assistance with fingerprinting, data entry/retrieval, and filing reports

Process/Skill Questions

- What further advances in technology are predicted for the future?
- How have computers enhanced the effectiveness of all employees in the criminal justice field?

M004: Identify the investigating officer's tasks when working on various types of criminal cases

Definition: Process should include the following:

- review crime-scene security and other priorities
- complete crime-scene notes and sketches
- complete crime-scene processing (fingerprint processing and identification as well as other types of forensic evidence)
- discuss interview technique of witnesses and potential suspects
- search for different types of physical evidence
- collect and preserve evidence
- participate in a mock crime scene

Process/Skill Questions

- What factors should be considered when investigating different kinds of crime, such as rape, homicide, robbery, burglary, abduction?
- What types of information can an officer obtain from observing the scene of a crime?

M005: Conduct an interview

Definition: Process should include the following:

- consider legal issues (voluntary vs. involuntary interview)
- explain the importance of listening skills
- determine correct questions to ask and proper timing of questioning
- use knowledge of body language (signs of distress or lying)
- use note-taking skills
- explain the importance of surroundings
- define *interview* vs. *interrogation*
- demonstrate interview skills, using practical experience

Process/Skill Questions

- What would be the ideal setting for conducting an interview?

- Why is it crucial to know the difference between an interview and interrogation?

M006: Write a report based on notes

Definition: Process should include the following:

- use the five “W’s”: who, what, when, where, and why
- emphasize neatness, grammar, and accuracy
- emphasize good organization of notes

Process/Skill Questions

- Why is it important to write a neat and accurate report?
- What criteria should be used to evaluate a report?
- How can officers improve report-writing skills?

**DUTY N:
Exploring Search and Seizure**

Task:

N001: Define *probable cause*, and explain how it can be established

Definition: Process should include the following:

- explain probable cause in lay terms
- explain the exclusionary rule and reasons for it
- explain ways probable cause is established
- discuss the potential consequences of an illegal search
- explain the relationship between probable cause and obtaining search warrants
- explain the relationship between probable cause and searching without a warrant
- discuss the safeguards to unreasonable searches and seizure under the Fourth Amendment and related rulings
- discuss the placement of probable cause on a continuum of proof

Process/Skill Questions

- What is the exclusionary rule?
- What are the consequences of an illegal search?
- What is probable cause?
- How can probable cause be established?

N002: Demonstrate procedures for obtaining and executing a search warrant

Definition: Process should include the following:

- define *affidavit*, and explain its purpose as related to search warrants
- explain when a search warrant should be obtained
- explain the use of force when carrying out a search, with a warrant, of a person
- describe the scope of a search without a warrant involving individuals, premises, and vehicles

- describe the articles that may be seized as a result of a search with a warrant
- explain and apply the meaning of *inadvertent discovery*
- explain the conditions under which individuals on the premises named on a warrant may be searched
- complete an affidavit, present an affidavit to a magistrate, search individuals identified on the warrant, search places or vehicles identified on the warrant, and seize appropriate items found during a legal search (practice through role-playing)

Process/Skill Questions

- What are the three things that must be named in an affidavit for a search warrant?
- Under what circumstances may a police officer with a valid warrant search a person?
- Under what conditions can a person who is not named on a warrant be searched?

N003: Explain the conditions under which searches and seizures may be conducted

Definition: Process should include the following:

- list the requirements for searching a person
- explain the scope of a search from incident to arrest
- describe three circumstances under which premises may be searched without a warrant
- describe property that may be reasonably seized during a search without a warrant
- describe a situation in which a vehicle may be searched without a warrant
- explain the concept of consent as it pertains to searches
- discuss the reasons searches may be conducted during emergencies or after hot pursuit

Process/Skill Questions

- What are two emergency conditions under which an officer may search a premise?
- What are three reasons why a vehicle can be searched without a warrant?
- What are four conditions under which a police officer can stop a person in a public place?

N004: Define *chain of evidence*, and explain its importance

Definition: Process should include the following:

- explain *evidence*, *material evidence*, and *chain of evidence*
- discuss the importance of maintaining the chain of evidence from the point of seizure through trial
- review the proper collection, tagging, preservation, and transportation of evidence
- explain the reasons for excluding evidence at a trial
- define the meaning of *hearsay evidence* and its admissibility at a trial

Process/Skill Questions

- What is the importance of maintaining the chain of evidence?
- Do you know of any cases that have been compromised due to improper chain of evidence? Explain.

**DUTY O:
Arresting Suspects**

Task:

O001: Identify the elements of probable cause to arrest

Definition: Process should include the following:

- explain the legal meaning of *probable cause* as it pertains to arrest
- discuss establishing probable cause for arrest
- review five areas courts examine to judge the reasonableness of an officer's conclusions that probable cause for arrest exists:
 - officer's observation
 - other sources of information
 - patterns of criminal behavior
 - officer's training and experience
 - influences and investigative deductions made by the officer

Process/Skill Questions

- How does the establishment of probable cause affect subsequent prosecution?
- What is the role of hearsay information in establishing probable cause?

O002: Describe the elements that distinguish arrest from other police-citizen contacts

Definition: Process should include the following:

- define *arrest* and *investigative detention*
- define *felony arrest*
- explain the rules of misdemeanor arrest, including assault and battery and shoplifting
- explain the use of force to affect arrest
- describe the difference between pat down (stop and frisk) and search
- explain the conditions under which a person being questioned must be advised of his/her rights

Process/Skill Questions

- When does voluntary conversation become an arrest?
- Under what conditions may force be used during an arrest?

O003: Identify the constitutional rights of a person under arrest

Definition: Process should include the following:

- discuss amendments/case laws, including—Mapp vs. Ohio (1961), Terry vs. Ohio (1968), Escobedo vs. Illinois (1964), Miranda vs. Arizona (1966), and Gideon vs. Wainwright (1963)
- discuss the exclusionary rule as it pertains to confessions

Process/Skill Questions

- What impact does the requirement of police to notify suspects of rights have on the number of crimes solved?

- Why should police be required to ensure that suspects are aware of their constitutional rights prior to questioning (“Mirandizing”)?

O004: Explain the proper procedure for searches during the course of an arrest

Definition: Process should include the following:

- list the types of objects searched for during an arrest (weapon, evidence, contraband)
- list the types of personal searches (cursory, field, and body)
- discuss proper techniques for searching males
- discuss proper techniques for searching females
- discuss proper techniques for standing, kneeling, and prone searches
- review the principles and proper procedures for strip searches
- review the principles and techniques for vehicle searches
- explain the legal guidelines dealing with search incident to arrest

Process/Skill Questions

- How does the Fourth Amendment affect when and how search incident to arrest is done?

**DUTY P:
Maintaining Custody of Prisoners**

Task:

P001: Describe procedures for safe transport of prisoners

Definition: Process should include the following:

- demonstrate the search of a transport vehicle and the sample items found
- explain how prisoners are secured in the vehicle
- review important information to be given to the dispatcher
- review procedures for transporting one or more prisoners by one or two officers
- discuss special considerations for transporting female, juvenile, sick, or injured prisoners

Process/Skill Questions

- What information should be given to the dispatcher when transporting a prisoner?
- What special considerations should be involved when transporting female prisoners? Juvenile prisoners? Sick or injured prisoners?

P002: Demonstrate the use of temporary restraints

Definition: Process should include the following:

- identify the purpose of restraint devices such as standard-issue handcuffs, disposable cuffs, waist belt with handcuff ring, and locking leg irons
- explain your local department’s policy regarding use of restraining devices on various types of prisoners
- discuss the purpose of handcuffs, emphasizing their temporary effectiveness in impeding attack, escape, or destruction/concealment of evidence or contraband
- explain the limitations or dangers of handcuffs

- apply handcuffs to a suspect in the standing, kneeling, and prone search positions
- review safety precautions that must be followed when using handcuffs

Process/Skill Questions

- From what three positions should a suspect be handcuffed?
- Why should the officer never handcuff a suspect or prisoner with arms in front?
- What are some of the instruments that suspects or prisoners can use to free themselves from handcuffs?

P003: Outline the procedures for booking a prisoner into the jail or lockup

Definition: Process should include the following:

- demonstrate the methods designed to prevent injury to a prisoner (self-inflicted or inflicted by others)
- explain the reasons for a re-search of a prisoner being booked into the jail
- demonstrate the methods for control and discipline of prisoners during booking
- explain reasons for legally required records associated with booking
- demonstrate basic fingerprinting techniques
- demonstrate rolling a set of classified prints
- discuss the methods of booking females, juveniles, or sick or injured, mentally deranged, or intoxicated prisoners

Process/Skill Questions

- The inmate population far exceeds the correctional staff. How do the guards reduce the possibility of an inmate takeover?
- What national system stores the fingerprints and who maintains the system?
- Why is it important to fingerprint individuals who are arrested?

P004: Explain the concept of prisoner rights and its effect on the treatment of inmates

Definition: Process should include the following:

- review the provisions of the Civil Rights Act of 1871
- discuss the importance of the U.S. Supreme Court's ruling in Cooper vs. Pate (1964)
- discuss the prisoners' rights movement and how it affected changes in prison conditions and treatment of inmates
- discuss the need for security in prisons and jails and how the need for security must restrict the rights of prisoners
- compare how search-and-seizure laws are applied by the police and correctional officers inside a prison
- discuss recent developments concerning the rights of pretrial detainees
- discuss the rights of religious expression within prisons

Process/Skill Questions

- What is the relationship between prisoners' rights and the minimum standards for local jails and lockups?

P005: Identify the minimum standards for local jails and lockups

Definition: Process should include the following:

- review the minimum standards for sanitation; nutrition; prisoner safety; health care; visitation, mail, and phone calls; and legal aid to prisoners

Process/Skill Questions

- What is the importance of maintaining these minimum standards for inmates?
- What constitutional basis might have encouraged these standards (cruel and unusual punishment)?

DUTY Q: LAW ENFORCEMENT II
Investigating Criminal Justice Careers

Task:

Q001: Describe standards for physical fitness for all officers

Definition: Process should include the following:

- list the types of physical training to prepare for the employment process
- list the types of physical training to follow *after* employment with a particular agency
- discuss the importance of physical fitness for law enforcement or correctional officers

Process/Skill Questions

DUTY R:
Defining Crimes

Task:

R001: Identify crimes associated with narcotics and controlled substances

Definition: Process should include the following:

- review the connection between drugs and crime
- define schedules of controlled substances (including penalties)
- discuss methods of use and transportation
- identify certain drugs by description and effects
- list the penalties for manufacture, sale, or distribution
- explain illegal animal-product trade (as an example of controlled substance other than narcotics)

Process/Skill Questions

- How does society suffer from drug use?
- What are some methods of use and transportation of drugs?
- What are possible consequences of drug use?
- What are the different categories of mind-altering substances?

R002: Identify crimes against children as defined by Arkansas law, including child pornography

Definition: Process should include the following:

- review misdemeanors relating to children (contributing to the delinquency, child neglect)
- discuss felonies relating to children (felony neglect, child abuse, sex crimes involving juveniles, including child pornography on the Internet)

Process/Skill Questions

- What are some misdemeanors relating to children?
- What are some felonies relating to children?

**DUTY S:
Investigating Crimes**

Task:

S001: Identify the investigating officer's tasks when working on various types of criminal cases

Definition: Process should include the following:

- review crime-scene security and other priorities
- complete crime-scene notes and sketches
- complete crime-scene processing (fingerprint processing and identification as well as other types of forensic evidence)
- discuss interview technique of witnesses and potential suspects
- search for different types of physical evidence
- collect and preserve evidence
- participate in a mock crime scene

Process/Skill Questions

- What factors should be considered when investigating different kinds of crime, such as rape, homicide, robbery, burglary, abduction?
- What types of information can an officer obtain from observing the scene of a crime?

**DUTY T:
Exploring Search and Seizure**

Task:

T001: Define *probable cause*, and explain how it can be established

Definition: Process should include the following:

- explain probable cause in lay terms
- explain the exclusionary rule and reasons for it
- explain ways probable cause is established
- discuss the potential consequences of an illegal search
- explain the relationship between probable cause and obtaining search warrants

- explain the relationship between probable cause and searching without a warrant
- discuss the safeguards to unreasonable searches and seizure under the Fourth Amendment and related rulings
- discuss the placement of probable cause on a continuum of proof.

Process/Skill Questions

- What is the exclusionary rule?
- What are the consequences of an illegal search?
- What is probable cause?
- How can probable cause be established?

T002: Demonstrate procedures for obtaining and executing a search warrant

Definition: Process should include the following:

- define *affidavit*, and explain its purpose as related to search warrants
- explain when a search warrant should be obtained
- explain the use of force when carrying out a search, with a warrant, of a person
- describe the scope of a search without a warrant involving persons, premises, and vehicles
- describe the articles that may be seized as a result of a search with a warrant
- explain and apply the meaning of *inadvertent discovery*
- explain the conditions under which individuals on the premises named on a warrant may be searched
- complete an affidavit, present an affidavit to a magistrate, search individuals identified on the warrant, search places or vehicles identified on the warrant, and seize appropriate items found during a legal search (practice through role-playing)

Process/Skill Questions

- What are the three things that must be named in an affidavit for a search warrant?
- Under what circumstances may a police officer with a valid warrant search a person?
- Under what conditions can a person who is not named on a warrant be searched?

T003: Explain the conditions under which searches and seizures may be conducted

Definition: Process should include the following:

- list the requirements for searching a person
- explain the scope of a search from incident to arrest
- describe three circumstances under which premises may be searched without a warrant
- describe property that may be reasonably seized during a search without a warrant
- describe a situation in which a vehicle may be searched without a warrant
- explain the concept of consent as it pertains to searches
- discuss the reasons searches may be conducted during emergencies or after hot pursuit

Process/Skill Questions

- What are two emergency conditions under which an officer may search a premise?
- What are three reasons why a vehicle can be searched without a warrant?

- What are four conditions under which a police officer can stop a person in a public place?

T004: Define *chain of evidence*, and explain its importance

Definition: Process should include the following:

- explain *evidence, material evidence, and chain of evidence*
- discuss the importance of maintaining the chain of evidence from the point of seizure through trial
- review the proper collection, tagging, preservation, and transportation of evidence
- explain the reasons for excluding evidence at a trial
- define the meaning of *hearsay evidence* and its admissibility at a trial

Process/Skill Questions

- What is the importance of maintaining the chain of evidence?
- Do you know of any cases that have been compromised due to improper chain of evidence? Explain.

**DUTY U:
Arresting Suspects**

Task:

U001: Identify the elements of probable cause to arrest

Definition: Process should include the following:

- explain the legal meaning of *probable cause* as it pertains to arrest
- discuss establishing probable cause for arrest
- review five areas courts examine to judge the reasonableness of an officer's conclusions that probable cause for arrest exists:
 - officer's observation
 - other sources of information
 - patterns of criminal behavior
 - officer's training and experience
 - influences and investigative deductions made by the officer

Process/Skill Questions

- How does the establishment of probable cause affect subsequent prosecution?
- What is the role of hearsay information in establishing probable cause?

U002: Describe the elements that distinguish arrest from other police-citizen contacts

Definition: Process should include the following:

- define *arrest* and *investigative detention*
- define *felony arrest*
- explain the rules of misdemeanor arrest, including assault and battery and shoplifting
- explain the use of force to affect arrest

- describe the difference between pat down (stop and frisk) and search
- explain the conditions under which a person being questioned must be advised of his/her rights

Process/Skill Questions

- When does voluntary conversation become an arrest?
- Under what conditions may force be used during an arrest?

U003: Identify the constitutional rights of a person placed under arrest

Definition: Process should include the following:

- discuss amendments/case laws, including—Mapp vs. Ohio (1961), Terry vs. Ohio (1968), Escobedo vs. Illinois (1964), Miranda vs. Arizona (1966), and Gideon vs. Wainwright (1963)
- discuss the exclusionary rule as it pertains to confessions

Process/Skill Questions

- What impact does the requirement of police to notify suspects of their rights have on the number of crimes solved?
- Why should police be required to ensure that suspects are aware of their constitutional rights prior to questioning (“Mirandizing”)?

U004: Explain the proper procedure for searches during the course of an arrest

Definition: Process should include the following:

- list the types of objects searched for during an arrest (weapon, evidence, contraband)
- list the types of personal searches (cursory, field, and body)
- discuss proper techniques for searching males
- discuss proper techniques for searching females
- discuss proper techniques for standing, kneeling, and prone searches
- review the principles and proper procedures for strip searches
- review the principles and techniques for vehicle searches
- explain the legal guidelines dealing with search incident to arrest

Process/Skill Questions

- How does the Fourth Amendment affect when and how search incident to arrest is done?

DUTY V: CRIMINAL LAW
Exploring Search and Seizure

Task:

V001: Demonstrate procedures for obtaining and executing a search warrant

Definition: Process should include the following:

- define *affidavit*, and explain its purpose as related to search warrants
- explain when a search warrant should be obtained
- explain the use of force when carrying out a search, with a warrant, of a person

- describe the scope of a search without a warrant involving individuals, premises, and vehicles
- describe the articles that may be seized as a result of a search with a warrant
- explain and apply the meaning of *inadvertent discovery*
- explain the conditions under which individuals on the premises named on a warrant may be searched
- complete an affidavit, present an affidavit to a magistrate, search individuals identified on the warrant, search places or vehicles identified on the warrant, and seize appropriate items found during a legal search (practice through role-playing)

Process/Skill Questions

- What are the three things that must be named in an affidavit for a search warrant?
- Under what circumstances may a police officer with a valid warrant search a person?
- Under what conditions can a person who is not named on a warrant be searched?

V002: Explain the conditions under which searches and seizures may be conducted

Definition: Process should include the following:

- list the requirements for searching a person
- explain the scope of a search from incident to arrest
- describe three circumstances under which premises may be searched without a warrant
- describe property that may be reasonably seized during a search without a warrant
- describe a situation when a vehicle may be searched without a warrant
- explain the concept of consent as it pertains to searches
- discuss the reasons searches may be conducted during emergencies or after hot pursuit

Process/Skill Questions

- What are two emergency conditions under which an officer may search a premise?
- What are three reasons why a vehicle can be searched without a warrant?
- What are four conditions under which a police officer can stop a person in a public place?

**DUTY W:
Arresting Suspects**

Task:

W001: Identify the elements of probable cause to arrest

Definition: Process should include the following:

- explain the legal meaning of *probable cause* as it pertains to arrest
- discuss establishing probable cause for arrest
- review five areas courts examine to judge the reasonableness of an officer's conclusions that probable cause for arrest exists:
 - officer's observation
 - other sources of information
 - patterns of criminal behavior

- officer's training and experience
- influences and investigative deductions made by the officer

Process/Skill Questions

- How does the establishment of probable cause affect subsequent prosecution?
- What is the role of hearsay information in establishing probable cause?

W002: Describe the elements that distinguish arrest from other police-citizen contacts

Definition: Process should include the following:

- define *arrest* and *investigative detention*
- define *felony arrest*
- explain the rules of misdemeanor arrest, including assault and battery and shoplifting
- explain the use of force to affect arrest
- describe the difference between pat down (stop and frisk) and search
- explain conditions under which a person being questioned must be advised of his/her rights

Process/Skill Questions

- When does voluntary conversation become an arrest?
- Under what conditions may force be used during an arrest?

W003: Identify the constitutional rights of a person placed under arrest

Definition: Process should include the following:

- discuss amendments/case laws, including—Mapp vs. Ohio (1961), Terry vs. Ohio (1968), Escobedo vs. Illinois (1964), Miranda vs. Arizona (1966), and Gideon vs. Wainwright (1963)
- discuss the exclusionary rule as it pertains to confessions

Process/Skill Questions

- What impact does the requirement of police to notify suspects of their rights have on the number of crimes solved?
- Why should police be required to ensure that suspects are aware of their constitutional rights prior to questioning (“Mirandizing”)?

W004: Explain the proper procedure for searches during the course of an arrest

Definition: Process should include the following:

- list the types of objects searched for during an arrest (weapon, evidence, contraband)
- list the types of personal searches (cursory, field, and body)
- discuss proper techniques for searching males
- discuss proper techniques for searching females
- discuss proper techniques for standing, kneeling, and prone searches
- review the principles and proper procedures for strip searches
- review the principles and techniques for vehicle searches
- explain the legal guidelines dealing with search incident to arrest

<p>Process/Skill Questions</p> <ul style="list-style-type: none"> • How does the Fourth Amendment affect when and how search incident to arrest is done?
<p>DUTY X: Exploring Juvenile Justice</p>
<p>Task:</p>
<p>X001: Describe the scope of authority of the Juvenile Court of Arkansas</p> <p><i>Definition:</i> Process should include the following:</p> <ul style="list-style-type: none"> • define <i>juvenile</i> • classify juveniles who fall under the Juvenile Court System • list minimum and maximum ages for adjudication as a juvenile and for trial as an adult • review alternatives to disposition available to judges <p>Process/Skill Questions</p> <ul style="list-style-type: none"> • What is the purpose of juvenile diversion programs? • Why do judges have so much authority in dealing with juveniles?
<p>X002: Identify the constitutional guarantees affecting juveniles taken into custody</p> <p><i>Definition:</i> Process should include the following:</p> <ul style="list-style-type: none"> • review case law that relates to juveniles taken into custody • define <i>parens patriae</i> • compare due process rights of adults to those of juveniles • discuss benefits of adversarial, formal trials as well as the informal hearings of juveniles as they relate to the constitutional rights of the defendant <p>Process/Skill Questions</p> <ul style="list-style-type: none"> • Why do juveniles and adults have different due process rights? • What landmark Supreme Court cases have had an impact on the concept of <i>parens patriae</i>?
<p>X003: Outline the stages of a typical juvenile case from arrest through adjudication</p> <p><i>Definition:</i> Process should include the following:</p> <ul style="list-style-type: none"> • explain the types of arrest (i.e., petition, detention order, etc.) • discuss the roles of a juvenile intake officer and probation officer • review the purpose and possible results of an intake interview • review details of a detention hearing and/or transfer hearing • describe facilities operated by the Department of Corrections for juvenile offenders <p>Process/Skill Questions</p> <ul style="list-style-type: none"> • When is it necessary for an officer to obtain a warrant instead of a petition for a juvenile? • What is the role of the intake officer in a juvenile's arrest?

X004: Describe the purposes of various dispositions available to Juvenile Court

Definition: Process should include the following:

- review dispositions, including foster care, shelter care, group home, detention center, learning center, jail, community service, and probation

Process/Skill Questions

- Why are there so many alternatives for the disposition of juvenile cases?
- What is the difference between a group home and a detention center?
- Why is community service seen as a viable alternative to jail time?

X005: Explain procedures for handling juvenile records

Definition: Process should include the following:

- explain restrictions on the fingerprinting and photographing of juveniles
- discuss Arkansas requirements for filing juvenile records

Process/Skill Questions

- What impact does a juvenile record have on future criminal justice employment?
- When and why are juvenile records sealed?

SkillsUSA

DUTY A: Self-improvement
Task:
A001: Complete a self-assessment and identify individual learning styles <i>Definition:</i> Process should include the following: <ul style="list-style-type: none">• Identify and list individual strengths• Identify and list areas in need of improvement Process/Skill Questions
A002: Discover self-motivation techniques and establish short-term goals <i>Definition:</i> Process should include the following: <ul style="list-style-type: none">• Develop a list of short-term goals• Discuss ways to change or improve lifestyle appearance and behavior Process/Skill Questions
A003: Determine individual time-management skills <i>Definition:</i> Process should include the following: <ul style="list-style-type: none">• Prepare and keep a time journal• Discuss ways to improve time-management skills Process/Skill Questions
A004: Define future occupations <i>Definition:</i> Process should include the following: <ul style="list-style-type: none">• Search the Internet for career opportunities within specified fields of study• Prepare a presentation on a specified career area Process/Skill Questions
A005: Develop an awareness of cultural diversity and equity issues <i>Definition:</i> Process should include the following: <ul style="list-style-type: none">• Research a tradition modeled by the individual's family• Develop personal philosophy statements regarding gender equity Process/Skill Questions

A006: Define the customer

Definition: Process should include the following:

- Differentiate between external and internal customers
- Discuss factors that contribute to poor customer relationships

Process/Skill Questions

A007: Recognize the benefits of doing a community service project

Definition: Process should include the following:

- Discuss and list ways to become involved in the community
- Develop a community service project

Process/Skill Questions

A008: Demonstrate effective communication with others

Definition: Process should include the following:

- Identify and list personal barriers to listening
- Develop a personal plan to overcome barriers to listening

Process/Skill Questions

A009: Participate in a shadowing activity

Definition: Process should include the following:

- Summarize the experience of the job shadowing activity

Process/Skill Questions

A010: Identify the components of an employment portfolio

Definition: Process should include the following:

- Identify the parts of a portfolio
- Design a personal employment portfolio

Process/Skill Questions

A011: List proficiency in program competencies

Definition: Process should include the following:

- Complete an interpersonal competency assessment

Process/Skill Questions

<p>DUTY B: Civic, Social, and Business Awareness</p>
<p>Task:</p>
<p>B001: Measure/modify short-term goals</p> <p><i>Definition:</i> Process should include the following:</p> <ul style="list-style-type: none"> • Discuss steps to pursue short-term goal(s) <p>Process/Skill Questions</p>
<p>B002: Identify stress sources</p> <p><i>Definition:</i> Process should include the following:</p> <ul style="list-style-type: none"> • List personal sources of stress • Discuss techniques to cope with individual sources of stress <p>Process/Skill Questions</p>
<p>B003: Select characteristics of a positive image</p> <p><i>Definition:</i> Process should include the following:</p> <ul style="list-style-type: none"> • Discuss actions and traits that lead to a positive image • Discuss actions and traits that lead to a negative image <p>Process/Skill Questions</p>
<p>B004: Demonstrate awareness of government, professional organizations, and trade unions</p> <p><i>Definition:</i> Process should include the following:</p> <ul style="list-style-type: none"> • Identify the state governor, legislators, and senators • Identify professional organizations pertaining to specific career areas <p>Process/Skill Questions</p>
<p>B005: Apply team skills to a group project</p> <p><i>Definition:</i> Process should include the following:</p> <ul style="list-style-type: none"> • Form a team to develop a class project <p>Process/Skill Questions</p>
<p>B006: Observe and critique a meeting</p> <p><i>Definition:</i> Process should include the following:</p> <ul style="list-style-type: none"> • Attend a formal meeting held within the community • Critique the attended meeting

Process/Skill Questions

B007: Demonstrate business meeting skills

Definition: Process should include the following:

- List and discuss the basic rules to ensure an orderly and business-like meeting
- Role-play appropriate meeting skills

Process/Skill Questions

B008: Demonstrate social etiquette

Definition: Process should include the following:

- Role-play appropriate social behavior
- Differentiate between good and bad manners

Process/Skill Questions

B009: Complete survey for employment opportunities

Definition: Process should include the following:

- Gather information on a particular employment opportunity of interest
- Conduct an Internet search of a specific career area

Process/Skill Questions

B010: Review a professional journal and develop a 3- to 5-minute presentation

Definition: Process should include the following:

- Develop a presentation on the content, purpose, and distribution of a particular professional journal

Process/Skill Questions

B011: Identify customer expectations

Definition: Process should include the following:

- List and discuss customer expectations
- Discuss the consequences of unmet customer expectations

Process/Skill Questions

B012: Complete a job application

Definition: Process should include the following:

- Obtain a job application from various businesses in the community
- Conduct a mock job interview

Process/Skill Questions

B013: Identify a mentor

Definition: Process should include the following:

- Define mentor
- Discuss ways in which a mentor can help an individual meet career goals

Process/Skill Questions

B014: Assemble your employment portfolio

Definition: Process should include the following:

- Develop an employment portfolio

Process/Skill Questions

B015: Explore supervisory and management roles in an organization

Definition: Process should include the following:

- Examine an organizational chart
- Discuss the responsibilities of managers and supervisors

Process/Skill Questions

B016: Recognize safety issues

Definition: Process should include the following:

- Discuss the safety issues within a given career area

Process/Skill Questions

B017: Evaluate your proficiency in program competencies

Definition: Process should include the following:

- Define task and competency
- List competencies associated with a specified career area

Process/Skill Questions

Curriculum Frameworks

Purpose

This section of the framework contains material to help instructors in technical and professional programs reinforce basic skills in the areas of reading and writing, mathematics, and science.

The technical portion of this guide takes a more direct approach by using specific duty and task listings, but changes in the academic section lead in a more general direction. The reason for this is simple: All good instructors do not teach in the same way. However, all good instructors share the trait of being able to connect their material to everyday life. For example, understanding concepts related to heat are important for cosmetology students as well as lathe operators in manufacturing plants. However, each program will probably take a different approach in the amount of detail and examples relating to heat concepts. Both groups require basic science knowledge of principles relating to heat, but the application of the principles will be different.

Basic Skills: The Content Areas

Included in this guide are materials to support basic skills in reading and writing, mathematics, and science. The overall approach taken here is a move toward problem-solving skills. By problem solving, we mean the ability to take information and use it for a purpose: to take action, make decisions, predict outcomes, suggest improvements. Another term for these thinking skills is a general “literacy.”

Literacy skills always have been in demand in the workplace. A quick review of workplace training programs and other literature regarding adult education demonstrates that the need for a literate workforce is still one of the most pressing problems employers face today. Indeed, many employers (from small- and medium-sized businesses to Fortune 500 companies) have spent hundreds of millions of dollars on in-house basic skills training programs.

What constitutes a literate workforce? There are many definitions for literacy and hundreds of tests that measure it, but when employers are asked what they’re looking for in potential new hires, the answers are general: They want individuals who can read and write; show up on time; think and solve problems; and keep their personal lives in order (that is, don’t bring a drinking problem into the workplace).

Viewed in this way, the words “literacy” and “literate” are good terms for what educators are trying to instill in their students, the future workforce. The more common definition (being able to read and write) is certainly appropriate, but the additional definitions (knowledgeable, educated, and well-informed) are also apt. It is this broad term, “literate,” that we use to guide instructors on what to cover in the classroom. No matter which Career and Technical Education area is being focused on, no matter how technical the terminology is, instructors are given the task of helping students take information, break it down into necessary parts, process details, and be able to come away with an understanding of some sort. This is “literacy,” and the process is the same for every subject area--teaching students how to think and solve problems.

Format

Each section includes a two-column table. Skills are listed on the left side; suggestions for implementing these skills into the curriculum are listed on the right side. Each suggestion is written in such a way that it can be tailored to most Career and Technical Education programs.

Using the Guide

This guide was prepared with four concepts in mind:

- The instructor is *aware of the need* for students to improve their basic skills.
- The instructor is the *best-qualified person* to decide how to include this material in the classroom or lab. The students’ abilities and needs should drive the instructor in deciding how to use, expand, or modify these topics.
- The instructor *already has curriculum that works* for his or her students. Therefore, the suggestions for reinforcing basic skills
 - must be easy to implement.
 - must stand alone.
 - do not need to be taught in a particular order.
 - must be open-ended enough to be useful for any career and technical program.
- ***Time is limited.*** Unless there are quick ways to reinforce basic skills, changes to the curriculum will not be made. Teaching basic skills in the context of technical material will help students make connections that are more memorable and will require no additional lesson planning. Just as instructors incorporate updates in technical knowledge,

they can add basic skills concepts as well. Adding a few concepts at a time will help students perform better in the lab as well as on tests and evaluations.

Methods

The following methods may help instructors decide how to increase basic skill knowledge:

- *Collaborative projects* -- how could a joint project between regular education teachers and vocational instructors reinforce concepts for both programs?
- *Outside assignments* -- would students benefit from an outside assignment explaining how a basic math (science, reading) concept ties to a process in the lab?
- *Extra credit* -- students needing extra credit can research outside topics and turn in a short summary of material.
- *“Need-to-know” assignments* -- students prepare a bulleted list of the basic concepts in science they need to know to correctly perform ____ operation in the lab.
- *Question of the day* -- a few daily math problems for students to answer at the beginning of class allow the instructor to set the tone for the material. This method also gives students an immediate goal when they enter the classroom and teaches them to stay on task. Bonus points may be awarded at the end of the week, quarter, semester, etc.
- *Two-minute oral presentations* -- students who need to practice speaking skills can be asked to give a two-minute oral presentation at the end of class summarizing the main points for the day. Or, a two-minute presentation at the beginning of class can recap the material from a previous class.
- *Connecting with workers* -- students can poll parents, friends, area employers, or other people to find out the top five basic science skills needed on the job.
- *Direct questioning* -- include a few basic knowledge questions in a presentation. Award points to groups based on correct answers.

Resources

In creating the Academic Reinforcement material for the technical and professional frameworks, we used a number of source documents and resources.

- The English Language Arts, Science, and Mathematics components of the *Curriculum Improvement Project* by Dr. Willard Daggett were consulted to ensure that the top-ranked

skills in those areas would be reflected in the academic support material. The English Language Arts and Science components have many linkages to the material included here. (The higher-level math skills such as trigonometry were not included in this document.)

- The Workplace Skills Enhancement Program (WSEP) at the University of Arkansas at Little Rock (UALR) has completed many training projects and job profiles for employers in Arkansas and has collected data from this work with Arkansas employers. Our constant contact with workers and employers provides a tremendous amount of data that we use in designing customized training programs and in working on projects such as curriculum frameworks. Also, the staff of WSEP has experience teaching in Arkansas public schools, the U.S. military, and Job Corps.
- Additionally, other groups within UALR (the Labor Education Program, the Institute for Economic Advancement, and the College of Business) provide resources regarding health and safety information, labor unions and their role in the workplace, computer and information technology, and other training and outreach program data.
- The U.S. Department of Labor (DOL) has many online documents and publications that support workers and issues regarding the workplace. (Work by Philippi and Greenan, 1988, on workplace skills was especially helpful.) Visit the Web site at www.dol.gov.
- The Occupational Safety and Health Administration (OSHA) provides online and other resources for instructors and professionals. For topics relating to safety and health, visit www.osha.gov.
- The Multistate Academic and Vocational Curriculum Consortium (MAVCC) is an organization that develops competency-based curriculum. For more on MAVCC, see www.mavcc.org.

ACADEMIC STANDARDS FOR READING AND WRITING
Strategies for Reinforcement
in the Career and Technical Education Classroom

Note:

*** indicates industry-related materials, handouts, notes, etc.**

Objective	Classroom Applications to Industry
<p><i>Present</i> <i>Review, and discuss</i> Master the list of skills employers want for the workplace regarding reading and writing</p>	<p>Use the list of skills employers want to introduce students to the requirements of the workplace.</p> <p>Depending on students' ability levels, any of the following methods may be used to increase their understanding of the concepts:</p> <ul style="list-style-type: none"> • Discussion • Interviewing parents or other adults in the workplace about the skills required • Interviewing employers about the skills in terms of importance • Identifying workplace situations in which certain skills become more important than others • Researching adult education programs to learn why deficits in these areas must be remediated and the cost spent yearly on these programs • Researching the topic of adult literacy
<p><i>Answer</i> simple comprehension or recall questions from a lecture or from written material</p>	<p>Provide two examples of workplace materials* on students' reading level. With the first, allow students to read information and then answer brief recall questions. With the second example, read aloud the material but do not give a handout. Ask brief recall questions.</p> <p>Compare the differences. How do students retain information better—orally or visually? Discuss learning styles and impact on the job.</p>

<i>Follow, give</i> oral instructions	Using instructions for a hands-on task, have students give <u>oral</u> instructions to a partner or group. Rate the effectiveness of the speaker.
<i>Follow, give</i> written instructions	Using a short list of instructions for a hands-on task, have students give <u>written</u> instructions to a partner or group. Rate the effectiveness of the speaker.
<i>Show the difference between relevant and irrelevant details</i>	Using a copy of workplace materials*, students underline relevant or important details in red, irrelevant or less important details in blue.
<i>Sort objects based on x number of criteria</i>	Using workplace materials*, sort a group of objects based on characteristics identified by instructor (e.g., by color, shape, defect, or a combination of these).
<i>Recognize, identify</i> technical vocabulary	Using workplace materials*, highlight technical vocabulary terms. Create a class dictionary of industry-related technical vocabulary. Students may add illustrations or diagrams. Each student receives a copy of the final product. Emphasize skills such as alphabetical order, guidewords, prefixes, suffixes, and pronunciation guides.
<i>Read aloud</i>	Read aloud from workplace materials* in groups or individually.
<i>Identify, explain</i> symbols, abbreviations, and acronyms relevant to subject area	Using workplace materials*, highlight symbols, abbreviations, and acronyms. Create a table with one column for each: symbols, abbreviations, acronyms. Classify each one and write in the meaning.
<i>Understand, use</i> rules of grammar, usage, spelling, punctuation	Identify the missing punctuation marks, misspelled words, and incorrect use of grammar from workplace materials*. Correct the mistakes.

<i>Discuss</i> uses and purposes of a variety of workplace communication tools	Find examples of a business letter, memo, report, brochure, proposal, schematic, map, and diagram.
<i>Duplicate</i> process demo by instructor	Using a workplace process, demonstrate steps to complete and have students perform individually or in groups.
<i>Notice, apply</i> word analysis techniques	Using workplace materials*, identify prefixes, suffixes, or roots that indicate meaning (e.g., therma = heat). ¹
<i>Match</i> parts from photographs or diagrams to actual objects	Using workplace materials*, follow a sequence of pictures or diagrams to build, create, or copy an item or process.
<i>Read</i> for main ideas and details	Use a graphic organizer ¹ to show main ideas and supporting details.
<i>Distinguish</i> between fact, opinion, and inference	Collect examples of materials based on fact or opinion/inference. Ask students to underline key terms that indicate the presence of facts or opinions.
<i>Distinguish</i> between rows and columns	Using charts or tables from workplace materials*, discuss the reasons for this format.
<i>Identify</i> a cell as a block where a row and column intersect	Identify the quantity in a particular cell.
<i>Select, use</i> appropriate resources and reference tools	Explain the uses for the following: dictionary, thesaurus, almanac, atlas, card catalog, encyclopedia. List reasons for choosing one reference tool over another. Use reference tools to answer questions related to industry or current events.
<i>Paraphrase</i> written or oral material into summary form	Using workplace materials*, determine the best way to condense or shorten the material so as to give an overview to a layperson. Using a set of guidelines appropriate to

	students' level in length and detail, summarize the information into bullet points.
<i>Interpret, fill out/complete forms and records</i>	Using workplace materials*, answer basic questions (e.g., summarize the list of parts from an inventory). Using blank forms or documents, fill in details. Pay close attention to directions. Students critique work with a partner. Create a form or document to be used in a workplace process.
<i>Use, develop a process for remembering details</i>	Use pneumatic devices to organize and remember details. Pneumatic devices ¹ include Semantic Maps, Thought Webs, and other creative tools to organize thinking.
<i>Proofread, correct mistakes in written drafts</i>	Using a newspaper article, locate and mark mistakes in grammar, punctuation, or usage. Correct mistakes in written drafts.
<i>Examine different types of writing used in the workplace (reports, memos, brochures, logs, blueprints, formulas, etc.)</i>	Gather samples of workplace materials*. Identify each by type. Compare and contrast the difference between: <ul style="list-style-type: none"> • audience (who the document is written for) • length • background information/education needed to understand material • level of detail • organization and layout of the document
<i>Understand the writing process</i>	In order to apply the writing process, create a workplace communication tool to be used for a specific purpose. Prewrite: Brainstorm, gather facts, or do research to create a <u>business letter, memo, report,</u>

	<p><u>brochure, proposal, schematic, map, or diagram.</u></p> <p>Identify the audience.</p> <p>Determine the purpose of the document.</p> <p>Write: Create a first draft.</p> <p>Revise and edit: Make changes to ensure accuracy.</p> <p>Look at the writing from a different point of view.</p> <p>Shorten or make more concise where possible.</p> <p>Use white space, bold print, and other formatting details to make the document easy to read.</p> <p>Publish: Decide on the best format for the final copy (size, type of material, layout, graphics, etc.)</p> <p>Publish the final draft.</p>
<p><i>Identify, create</i> sentences of different types</p>	<p>Using workplace materials*, find sentences of varying types. Examples include simple sentences (subject + predicate) and complex sentences (subject + predicate including clauses).</p> <p>Write sentences, paragraphs, or essays using sentences of different types (e.g., write a two-paragraph summary of today's lesson).</p>
<p><i>Identify, use</i> contractions correctly</p>	<p>Using workplace materials*, locate contractions (e.g., isn't, I'll).</p> <p>Identify misuses of contractions.</p> <p>Write a short list of directions relating to an</p>

	industry process, and use as many contractions as possible.
<i>Identify, use correctly</i> commonly misspelled words	<p>Using a list of commonly misspelled words¹, locate errors in the media (newspaper articles, Internet sites, magazines).</p> <p>Ask each student to identify his/her problem words from the list.</p> <p>Attempt to incorporate problem words into class activities (e.g., add them to a list of work instructions).</p> <p>Give short weekly quizzes focusing on five words per week. Award bonus points.</p>
<i>Identify, use correctly</i> the English irregular verbs	<p>From a list of irregular verbs, review the uses of each.</p> <p>Ask each student to identify his/her problem irregular verbs from the list.</p> <p>Attempt to incorporate problem verbs into class activities, such as making a collection of mistakes from print sources.</p>
<i>Identify, use</i> signal words and other cues to improve writing	<p>Use a list of signal words¹ and discuss their purpose in writing (signal words are words that raise a flag to a reader to pay attention). Examples --</p> <p>Signal words showing emphasis: Most of all, It should be noted, Of course</p> <p>Signal words showing a conclusion: Lastly, In summary, Finally</p> <p>Identify common signal words in workplace writing, especially in sequenced lists.</p> <p>Write a list of work instructions using signal words.</p>
<i>Identify</i> components of workplace documents such as blueprints, schematics, floor plans, and other	Label the parts of a workplace document.

industry-related documents	
<i>Place steps in proper sequence</i>	Using a list of steps or pictures, cut them apart so students can place them in the proper order.
<i>Analyze cause and effect</i>	Experiment with cause and effect in the classroom (e.g., change the sequence of events in a process).
<i>Determine missing information</i>	<p>Locate the information that is missing from a problem, and explain why the problem cannot be solved without it.</p> <p>To reinforce concepts, use a completed problem and remove the important details. Ask students if they can identify what's missing.</p>
<i>Differentiate between tools used for a job</i>	Given a list of tools and a list of functions, identify the most efficient tool for each task.
<i>Assemble or disassemble objects</i>	<p>From a list of oral or written instructions, assemble an object or complete a process.</p> <p>Have students write the instructions for disassembly.</p>
<i>Cross-reference materials to compare information</i>	Using more than one source document, compare the information given.
<i>Interpret reasoning behind rules or regulations</i>	Using workplace materials*, make a list of possible reasons or justifications for a safety guideline, regulation, etc.
<i>Show contrasts between approaches</i>	<p>Given a workplace scenario, write a brief approach to solving the problem. (Working in groups would be beneficial.)</p> <p>Compare and contrast each approach from the perspective of a worker, manager, supervisor.</p>
<i>Organize data in a new format</i>	Using workplace materials*, organize the information into a new format.

<i>Prove a rule or method's sufficiency</i>	Perform an experiment to determine how much tolerance is acceptable in a case study (e.g., find the range of drops of red dye sufficient to match the standard red color used in latex paint).
<i>Show relationships between two or more systems</i>	Using two or more partners related to industry, show or explain how they are interrelated (e.g., explain the relationship between social workers and hospitals).
Given examples of emergency situations, identify a real-world course of action	Using an emergency situation common to your industry, outline a step-by-step plan for action.
<i>Identify variables that affect the outcome of a process</i>	Experiment with or predict variables that affect the outcomes for a process (e.g., weather patterns that adversely affect a process, such as building a road).
<i>Infer situations that meet guidelines when complete information is not available</i>	Given a policy or industry standard that has debatable interpretations, list possible situations that can arise that do not have clear solutions in the policy. Discuss or debate the issues.
<i>Compare finished products to a set of guidelines</i>	Compare a set of objects to a set of guidelines (e.g., analyze a batch of parts and document how they do or do not meet a set of Quality Assurance guidelines). List any discrepancies (parts that do not meet guidelines) and categorize them by type (e.g., burns, holes, etc).
<i>Identify preventive measures for maintenance of a system</i>	List the needed routine maintenance to keep a system working properly.
<i>Predict new standards or rules that may become necessary in the future</i>	Identify recent areas of change or development in your industry. Discuss potential future needs or developments that may occur (e.g., potential need for better training requirements for airport personnel).

<p><i>Improve a process by streamlining (locating waste) or decreasing lost time</i></p>	<p>Examine a process in industry in step-by-step detail. Suggest ways to decrease time needed or make the process more efficient.</p> <p>Isolate the cause of failure in a process by performing an experiment.</p>
<p><i>Prepare a model explaining a concept</i></p>	<p>Build, draw, or create a model that explains a concept (e.g., show a need for environmental standards for water or air pollution).</p>

¹ Fry, Edward; Kress, Jacqueline; Fountoukidis, Dona. *Reading Teacher's Book of Lists*, 4th ed. ISBN 0-13-028185-9.

ACADEMIC STANDARDS FOR MATHEMATICS

Strategies for Reinforcement in the Career and Technical Education Classroom

Note:

* indicates industry-related materials, handouts, notes, etc.

Topics Listing
 Problem Solving
 Operations and Calculations
 Applications
 Data Analysis and Display

Objectives

Classroom Applications to Industry

<p><i>Present</i> <i>Review and discuss</i> Master the list of skills employers want for the workplace regarding mathematics</p>	<p>Use the list of skills employers want to introduce students to the requirements of the workplace.</p> <p>Depending on students' ability levels, any of the following methods may be used to increase their understanding of the concepts:</p> <ul style="list-style-type: none"> • Discussion • Interviewing parents or other adults in the workplace about the skills required • Interviewing employers about the skills in terms of importance • Identifying workplace situations in which certain skills become more important than others • Researching adult education programs to learn why deficits in these areas must be remediated and the cost spent yearly on these programs • Researching the topic of adult literacy
PROBLEM SOLVING	
<p><i>Examine, apply</i> problem-solving process</p>	<p>Define the problem What is being asked?</p> <p>Decide on a type of solution. Multistep or single-step question?</p>

	<p>Try any of these:</p> <ul style="list-style-type: none"> Estimate an answer Draw a diagram Find a pattern Guess and check Logical reasoning Make a graph Make an organized list Make a table Solve a simpler problem Use a simulation Work backwards Write an equation <p>Locate information you need. Do you have all the components?</p> <p>Get missing information. You may need to perform some other calculations</p> <p>Calculate. Look at the answer. How should the remainder be expressed?</p> <p>Check the solution. Is it reasonable?</p>
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OPERATIONS AND CALCULATIONS

<i>Read, write and count numbers</i>	<p>Read and write numbers (especially focus on very large and very small numbers where mistakes are common).</p> <p>Give a weekly quiz asking students to compare and sequence numbers. Example: 0.4445 ___ 0.4455 > or <</p> <p>Put these in order from smallest to largest: 0.66, 0.677, 0.67</p>
<i>Round numbers</i>	<p>Discuss your industry's use of decimals.</p> <p>Identify the place values needed to adequately perform a job. For example, a Quality Assurance Technician who works on the line in a manufacturing plant may need to use</p>

	<p>numbers through the ten-thousandths decimal place.</p> <p>Take a series of sample measurements, and round them to the nearest decimal place identified by the instructor.</p>
<i>Estimate numbers</i>	<p>The skill of making close estimations is tied to understanding accuracy. Discuss real-life situations in which estimation is used.</p> <p>Discuss the practice of estimation before calculation. Regular practice in estimating before calculating will teach students where they make errors and will increase their estimation skills.</p> <p>Discuss work situations in which estimation skills are required and possible consequences of making estimation errors. For example, is an estimate appropriate for inventory purposes? For ordering supplies?</p>
<i>Compute averages</i>	<p>Discuss averages in general terms. Calculate the average temperature, average rainfall or precipitation, average number of students per class, and other relevant examples.</p> <p>Using workplace materials*, calculate a series of averages. For example:</p> <ul style="list-style-type: none"> • Take 10 different measurements of a piece of pipe using a micrometer. • Compare the measurements. • Find the average of all the measurements. • Compare the average to the smallest and largest measurement. • Discuss the effects on quality. When is an average an acceptable benchmark measurement?
<i>Calculate with whole numbers; perform one-step problems with basic operations</i>	<p>Understand, at a level of complexity appropriate to your industry and to students' ability levels, basic principles of addition, subtraction, multiplication, and division.</p>

<p>Perform problems that require an understanding of the order of operations</p>	<p>Using workplace materials*, make a list of situations or problems that need more than one step to perform them.</p> <p>If the procedures (add, subtract, multiply, divide, etc.) are on the same level of importance, such as adding or subtracting, then the order of operations will not impact the way the problem is solved.</p> <p>If a problem requires more than one level of operation to solve (example, dividing and adding), work the problem correctly by performing the division part first and then the addition. Rework the problem using addition first. Compare the answers.</p> <p>Discuss the importance of reasoning skills to verify that an answer makes sense.</p>
<p>Understand the relationship between decimals, fractions, and percentages</p>	<p>Make a table comparing fractions, decimals, and percentages.</p>
<p>Compute with fractions, decimals, and percentages, and show an understanding of the relationship between them</p>	<p>Create sample problems using fractions that relate to everyday situations.</p> <ul style="list-style-type: none"> ▪ Poll the class on interesting topics (favorite food). Convert whole numbers to fractions. Votes: <ul style="list-style-type: none"> Pizza- 10 Salad- 2 BBQ- 8 <p>$10+2+8 = 20$ (recognize denominator value)</p> <p>$\frac{10}{20}$ Pizza $\frac{2}{20}$ Salad $\frac{8}{20}$ BBQ</p> <ul style="list-style-type: none"> ▪ Add the fractions. $\frac{10}{20} + \frac{2}{20} + \frac{8}{20} = \frac{20}{20}$ ▪ Convert the fractions to a whole number. (Total answer equals one class' worth of answers.) $\frac{10}{20} + \frac{2}{20} + \frac{8}{20} = \frac{20}{20} = 1$

	<ul style="list-style-type: none"> ▪ Convert the fractions to percentages. $\frac{10}{20} \text{ means } 10 \text{ divided by } 20 = 0.50$ <p>Move the decimal two places to the right. $0.50 = 50\%$</p> $\frac{2}{20} \text{ means } 2 \text{ divided by } 20 = 0.10$ <p>$0.10 = 10\%$</p> $\frac{8}{20} \text{ means } 8 \text{ divided by } 20 = 0.40$ <p>$0.40 = 40\%$</p> <p>$50\% + 10\% + 40\% = 100\%$ Notice the totals add to 100%.</p> <p>So, $\frac{20}{20} = 1 = 100\%$</p> <p>Using workplace materials*, calculate work-related questions using fractions, decimals, and percentages.</p> <p>Calculate shipping costs for Internet purchases (such as music from amazon.com).</p>
Solve formulas and equations	<p>Understand, at a level of complexity appropriate to your industry and to students' ability levels, basic principles of equations.</p> <ul style="list-style-type: none"> ▪ Work left to right ▪ Use order of operations ▪ Place numbers on one side, variables on the other side
Obtain squares and square roots	<p>Review the methods for calculating squares, square roots, cubes, and cube roots. Use industry-related formulas to demonstrate examples.</p> <p>Compare the difference between the two common answers to 32 (answer = 9, not 6).</p> <p>How would an incorrect value affect the work on the job?</p>

<i>Convert units of measure: Recognize components of measuring systems (U.S. and metric) for length</i>	Discuss industry measures and terms relating to length.
<i>Convert units of measure: Recognize components of measuring systems (U.S. and metric) for mass/weight</i>	Discuss industry measures and terms relating to mass/weight.
<i>Convert units of measure: Recognize components of measuring systems (U.S. and metric) for volume</i>	Discuss industry measures and terms relating to volume.
<i>Measure with a certain degree of accuracy</i>	Estimate measurements. Using workplace materials* and tools, take measurements of work-related and classroom items. Depending on ability level, students may measure to the nearest foot, inch, centimeter, etc.
APPLICATIONS	
<i>Solve word problems</i>	Help students feel more comfortable with word problems by placing simpler problems in word problem form; or take concepts students have already mastered and ask them to write word problems for each other to solve.
<i>Select/apply mathematical formulas</i>	Review a set of math formulas and then a list of sample problems. Decide which formula(s) apply to each problem.
<i>Understand the importance of time in the workplace</i>	Using workplace materials*, make a list of workplace scenarios that require using time correctly, such as keeping a time card or heating a liquid solution for 20 minutes.
<i>Recognize components of time systems (clocks and calendars)</i>	<ul style="list-style-type: none"> • a.m. and p.m. • Leap year • Military time
<i>Discuss, identify, understand terms relating to measuring time</i>	Discuss the units of time measurement and time vocabulary: second, minute, hour, day, week, month, year, leap year, fiscal year, quarter, annual, biannual, etc.

<p>Understand that time can be expressed in terms of equivalencies</p>	<p>Show the time equivalencies using fractions. For example: $1 \frac{1}{2}$ days = ___ hours</p> <p>1 day = 24 hours $+ \frac{1}{2}$ day = <u>+12 hours</u> $1 \frac{1}{2}$ days = 36 hours</p>
<p>Compute time conversions</p>	<p>Make a table that shows the equivalencies of time units.</p> <p>Compute conversion problems at the appropriate level of difficulty. Examples include:</p> <ul style="list-style-type: none"> • Convert minutes to hours • Convert hours to days • Convert seconds to years
<p>Calculate ratio and proportion</p>	<p>Review fractions when discussing ratio and proportion.</p> <p>Draw common classroom items to scale by finding a conversion rate (1 foot equals 1 inch).</p> <p>Make predictions using ratios. (If each student in the class has three children, how many children will there be altogether? Write the ratios.)</p>
<p>Apply geometry principles: Use formulas for measuring shapes of two dimensions</p>	<p>Determine the formulas that apply to two dimensions: perimeter, area, surface area. Find the perimeter of the classroom.</p> <p>Discuss the perimeter of objects that are not shaped as perfect squares. How does this change the formula for perimeter?</p> <p>Find the area of the tiles on the floor. Find the area of the classroom.</p> <p>Review that all areas are expressed in terms of square units (square inches, square miles, etc.).</p>
<p>Apply geometry principles: Use formulas for</p>	<p>Review the formulas that apply to three</p>

<p>measuring shapes of three dimensions</p>	<p>dimensions of objects: volume. Review that volume is expressed in cubic units.</p> <p>Find the volume of common objects such as soda cans, pizza boxes, etc.</p> <p>Discuss industry-specific needs for these formulas. For example, find the volume of a tank or silo.</p>
<p><i>Define terms relating to money</i></p>	<p>Understand, at a level of complexity appropriate to your industry and to students' ability levels, basic principles relating to money.</p> <p>For more advanced students, include terms and principles of economics, finance, or statistics.</p>
<p><i>Perform one-step problems involving money</i></p>	<p>Make change. (Count up--rather than backwards--to make change.)</p>
<p><i>Perform multiple-step problems using money</i></p>	<p>Calculate gross and net earnings.</p> <p>Calculate:</p> <ul style="list-style-type: none"> ▪ Interest ▪ Sales tax ▪ Percent off ▪ Sale price ▪ Profit percentages <p>Perform banking transactions.</p>
<p><i>Perform business-related financial activities</i></p>	<p>At a level of complexity appropriate to your industry and to students' ability levels, solve income/expense problems, prepare budgets, etc.</p>
<p><i>Use a calculator to perform computations</i></p>	<p>Identify appropriate activities that can be performed using a calculator (calculators allow students to concentrate on problem-solving strategies).</p> <p>Award prizes for weekly activities or competitions.</p>

<i>Calculate measurements taken from measuring devices</i>	Add, subtract, multiply, and divide measurement numbers by plugging them into formulas.
<i>Perform/prepare an inventory</i>	Use a sample group of items to prepare an inventory. Discuss the math processes that would apply to the inventory process. Review inventory vocabulary terms.
DATA ANALYSIS AND DISPLAY	
<i>Recognize types of visual representations</i>	<ul style="list-style-type: none"> • Charts • Graphs • Tables
<i>Interpret charts, graphs, and tables</i>	Answer simple questions about charts, graphs and tables. Solve multistep problems involving the correlation of graphs and tables.
<i>Collect/record data</i>	As appropriate to industry, practice sampling methods. Discuss safety precautions for sampling. Visit OSHA at the Department of Labor Web site for more details. Practice collecting and recording sample data from your industry (such as measurements taken using a micrometer). Compare class answers. Find the range of answers (maximum and minimum). Find the average. Discuss an acceptable range of answers (\pm), and graph the results showing the number that fell inside and outside the acceptable range.
<i>Review and apply principles of probability</i>	Use real-life examples that are highly motivating to direct the students' attention to probability principles. (Example, "I am thinking of a number between 1 and 50. The person who guesses the number will receive that many bonus points if s/he can tell me the probability of choosing the number correctly.")
<i>Use probability models to predict chance</i>	Calculate <u>theoretical probability</u> of an event

<p>events</p>	<p>(e.g., the probability of rolling a 5 on a die is 1/6).</p> <p>Find <u>empirical probability</u> of an event by performing repeated experiments. Compare the two probabilities.</p>
<p><i>Calculate</i> and interpret statistics</p>	<p>Identify the importance of using statistics correctly. Bring examples of statistics from the news or media and analyze them: Are they ambiguous? Are they correct? What data is the advertisement trying to get the public to see?</p> <p>For a humorous look at statistics, see <i>How to Lie with Statistics</i> by Huff and Geis.</p>
<p><i>Interpret</i> plans/blueprints</p>	<p>Review vocabulary and terms for plans, blueprints, and schematics.</p> <p>Build a plan or blueprint one layer at a time, starting with the basic identifying information.</p> <p>Add layers of wax paper or other transparent drawing material on top of the first layer that allows each layer to be viewed individually or the entire drawing as a whole.</p>
<p><i>Construct</i> charts and tables</p>	<p>Discuss chart types and chart vocabulary.</p> <p>Using workplace or sample data from the class, construct tables and charts. For a daily example, consult <i>USA Today</i> online and look for the snapshots section that shows a graph of some sort. Ask weekly bonus questions about the data.</p> <p>Challenge students to bring in examples of charts and graphs containing errors.</p>

ACADEMIC STANDARDS FOR SCIENCE

Strategies for Reinforcement in the Career and Technical Education Classroom

Note:

* indicates industry-related materials, handouts, notes, etc.

Topics Listing

General Science: Topics not specific to a content area

Physical Science: Mechanics and Physics

Energy and Waves

Thermodynamics

Electromagnetism

Chemistry

Optics

Life Science: Cell Biology

Evolution

Genetics and Heredity

Human and Animal Development

Anatomy: Ecology

Viruses

Bacteria

Plants

Earth Science: Earth in Space

Solar System/Astronomy

Atmosphere and Weather

Oceans and Water

Earth Resources

Objective

Classroom Applications to Industry

GENERAL SCIENCE	
<p><i>Present</i> <i>Review and discuss</i> Master the list of skills employers want for the workplace regarding science skills</p>	<p>Use the list of skills employers want to introduce students to the requirements of the workplace.</p> <p>Depending on students' ability levels, any of the following methods may be used to increase their understanding of the concepts:</p> <ul style="list-style-type: none"> • Discussion • Interviewing parents or other adults in the workplace about the skills required • Interviewing employers about the skills in terms of importance • Identifying workplace situations in which certain skills become more important than others • Researching adult education programs to learn why deficits in these areas must be remediated, and discover the cost to employers to educate adult workers • Researching the topic of adult literacy
<p>Perform computations as required to solve problems</p>	<p>Use the metric system to convert units of measure.</p> <p>Round numbers to correct number of significant figures.</p> <p>Determine percentage of error.</p> <p>Understand validity, reliability, accuracy, and precision.</p>
<p>Apply scientific method of inquiry</p>	<p>Identify the steps of the scientific method.</p> <p>Conduct experiments.</p> <p>Understand the following terminology:</p> <ul style="list-style-type: none"> • Conclusions vs. inferences • Variables • Replications • Samples/sample size
<p>Investigate science history as it applies to industry</p>	<p>In groups, research topics in science pertaining to your industry. Have students assign roles for each</p>

	<p>member of the group.</p> <p>Present findings in report format or in oral presentations.</p> <p>Investigate science ethics.</p> <p>Recognize the processes available for accountability in industry. For example, OSHA has a Safety and Health Program Assessment Worksheet whereby employers can be rated for safety issues. See http://www.osha.gov/SLTC/safetyhealth_ecat/mod3.htm</p> <p>[Note: Safety and Health is a mandatory subject of bargaining when a workplace is unionized; in both unionized and non-unionized workplaces, an employer cannot create and dominate workplace safety committees (see the National Labor Relations Act).]</p>
<i>Use scientific instruments to measure aspects of the environment</i>	Gather data on time, length, mass, pressure, volume, acceleration, or other measurables using instruments from the job.
<i>Demonstrate an understanding of data</i>	<p>List the processes involved in gathering data.</p> <p>Suggest ways that data can be grouped or organized.</p> <p>Collect specimens.</p> <p>Show how data can be represented (graphically, charts and diagrams, etc.).</p> <p>Construct a model to depict a basic concept.</p>
<i>Identify the seven basic S I (Systeme International) units</i>	<p>Length: meter, m</p> <p>Mass: kilogram, kg</p> <p>Time: second, s</p> <p>Electric current: ampere, A</p> <p>Temperature: Kelvin, K</p> <p>Amount of substance: mole, mol</p> <p>Luminous intensity: candela, cd</p>

	For a dictionary of units, see http://www.ex.ac.uk/cimt/dictunit/dictunit.htm
<i>Identify S I (Systeme International) Derived units</i>	Choose units appropriate to your industry (hertz, ohm, volt, watt, etc.). Create a picture dictionary demonstrating the concepts.
<i>Review relevant theories, laws, and models</i>	As relating to your industry, discuss important theories, laws, and models.
<i>Use reference tools to solve problems</i>	Use scientific reference tools (such as the Periodic Table of Elements) to learn more about specific industry concepts.
<i>Practice safe lab procedures</i>	Handle equipment with care. Demonstrate safety and first aid procedures. Identify harmful substances.
PHYSICAL SCIENCE	
<i>Understand the cyclical nature of systems</i>	Show, demonstrate, model, track the cycles of any of the following systems: <ul style="list-style-type: none"> • Growth and decay • Food webs • Weather • Water
<i>Analyze/classify matter according to type</i>	Identify types of matter (solids, liquids, gases). Which types are predominantly used in your area of industry?
<i>Explain the concepts of work and power</i>	Identify machines used in industry. Identify how energy levels change when work or power is increased/decreased. Identify fuel sources used in your industry. Discuss internal and external combustion. Create a model demonstrating the uses of levers and pulleys.

<p><i>Be familiar with concepts of motion</i></p>	<p>Measure acceleration and deceleration. Understand the relationship between speed and velocity by performing experiments. Recognize waves and vibrations as a type of motion.</p> <p>Understand action and reaction. Review laws pertaining to motion.</p>
<p><i>Understand concepts related to force</i></p>	<p>Show the need for balance of forces acting on an object.</p> <p>Observe centrifugal and centripetal forces in action.</p> <p>Show how friction is created and must be accounted for in using and preserving equipment.</p> <p>Create a chart showing types of lubricants needed in a factory and schedule of maintenance.</p> <p>Understand, at a level of complexity appropriate to your industry and to students' ability levels, basic principles of inertia.</p> <p>Show the relationship between pressure, mass, and weight.</p>
<p><i>Understand and apply principles relating to the atom</i></p>	<p>Understand that atoms have a positive, negative, or neutral charge. Classify protons, electrons, and neutrons. Identify ions.</p>
<p><i>Investigate forms of and changes in energy</i></p>	<p>Discuss how energy is measured.</p> <p>Observe changes in energy relationships. Identify catalysts and reactants.</p> <p>Identify sources of kinetic and potential energy in your industry.</p>
<p><i>Discuss, apply principles of electricity and electric currents</i></p>	<p>Identify types of circuits and switches.</p> <p>Show the difference between direct and alternating currents. Give examples of the best/most efficient use of each.</p>

	<p>Determine how electricity is measured, and solve problems using these terms. (Example, use Ohm's law to calculate current, resistance, and voltage.)</p> <p>Identify good conductors and insulators, and discuss how to choose them.</p> <p>Understand grounding, and create a visual display of grounding safety practices. Include the threat of static electricity.</p> <p>Show the uses of a vacuum tube by building a model.</p> <p>Compare the following ways of generating electricity:</p> <ul style="list-style-type: none"> • Hydroelectricity • Motors • Solar power • Steam/nuclear • Transformers • Incandescent (light) <p>Show the implications for your industry.</p> <p>As appropriate to your industry, identify electrochemical energy sources (cells, electrodes, batteries) and the processes of oxidation and reduction.</p>
<p><i>Be familiar with sound waves</i></p>	<p>Compare how sound waves travel between liquids, solids, and air.</p> <p>Examine different types (lengths) of sound waves.</p> <p>Examine decibels safe for human hearing.</p> <p>Identify safety precautions for industry regarding sound tolerance.</p> <p>Be able to use correctly the terms below as they relate to your industry. For example, ask students to write a short essay explaining a demonstration from class and include the following terms:</p> <ul style="list-style-type: none"> • Amplification • Audible range • Frequency

	<ul style="list-style-type: none"> • Acoustics • Resonance • Speed
<i>Be familiar with principles of heat</i>	<p>Differentiate between the three types of heat transfer (conduction, convection, radiation).</p> <p>Understand that substances expand and contract due to heating and cooling.</p> <p>Identify purpose and types of insulations used.</p> <p>Differentiate between heat and temperature.</p>
<i>Investigate and apply concepts relating to temperature</i>	Use the temperature scales; convert between Celsius and Fahrenheit.
<i>Explain the concepts of magnetism</i>	<p>Understand that currents create magnetic fields.</p> <p>Identify materials that are good conductors and the properties that make them such.</p> <p>Understand electromagnetic forces present in earth.</p>
<i>Investigate/apply chemical properties</i>	<p>Differentiate between acids and bases. Find pH for substances used in industry.</p> <p>Identify substances used in your industry and classify them by type.</p> <p>Name the major drugs, fertilizers, or additives used in your industry.</p> <p>Define and state examples of chemical reactions.</p> <p>Be familiar with solutions used in your industry.</p> <p>Compare saturated and unsaturated solutions.</p> <p>Determine whether a solution is soluble or insoluble.</p> <p>Explain solute and solvent.</p>
<i>Investigate forms of and changes in matter</i>	Compare and contrast physical and chemical

	<p>changes.</p> <p>Discuss the types of physical or chemical changes that take place in your industry from processing raw materials to manufacturing.</p>
<i>Understand and apply concepts relating to the elements</i>	<p>Examine the four elements that make up 99% of living organisms [hydrogen (H), oxygen (O), nitrogen (N), and carbon (C)].</p> <p>Element groups:</p> <ul style="list-style-type: none"> • Alkali metals • Alkaline earth metals • Transition metals • Other metals • Metalloids • Nonmetals • Halogens • Noble gases • Rare earth elements
<i>Be familiar with principles of light</i>	<p>Discuss light as a form of energy. Examine the light spectrum and note the relative smallness of visible light.</p> <p>Describe types of lighting systems.</p> <p>Define reflection and refraction.</p> <p>Explain how light carries information (by lasers), and show examples of the impact on technology/industry.</p> <p>Identify types of lenses.</p>
<i>Be familiar with principles of color</i>	<p>Diagram the main parts of the eye involved in seeing color (rods, cones).</p> <p>Use prisms to split light into the visible spectrum.</p> <p>Briefly explore color blindness. What precautions should colorblind people take regarding workplace safety?</p> <p>Define situations in which colorblindness impacts a worker's ability to do his/her job.</p>

LIFE SCIENCE

<p><i>Explain the presence of cells as the identifier of all living organisms</i></p>	<p>Examine the cells of organic material used in your industry, using books, the Internet, or a microscope.</p> <p>Recognize that cells divide or replicate to promote growth of an organism.</p> <p>Examine the parts of a cell. Compare the cell to a machine. How do the parts function and rely on each other?</p> <p>Give examples of one-celled and multiple-celled organisms.</p> <p>Review the classification system of all organisms (kingdom, phylum, etc.).</p> <p>Create a circle graph or pie chart (totaling 100%) showing the relationship (in numbers) between the groups of organisms:</p> <ul style="list-style-type: none">• Bacteria• Fungi• Viruses• Insects• Plants• Vertebrates• Invertebrates <p>Compare some of the cell processes (active and passive transport) with the processes in your industry.</p>
<p><i>Understand the progress of evolution of organisms</i></p>	<p>Recognize how a species will adapt to better fit in its environment over time.</p>
<p><i>Explain the role of genetics in human development</i></p>	<p>Understand, at a level of complexity appropriate to your industry and to students' ability levels, basic principles of heredity, including:</p> <ul style="list-style-type: none">• Half of an individual's genes are contributed by each parent• Traits that are inherited are either dominant or recessive from the parent(s)• Cell division by mitosis vs. meiosis• Disabilities are caused either by genetic/inherited conditions (such as

	Down's Syndrome) or in accidents occurring after birth, such as brain damage due to a car accident or a stroke
<i>Investigate/apply</i> principles of human development	Describe the life cycle of humans and other animals. Use the concept of human development to explain the need for understanding foundation skills in your area. (For example, children do not run before they walk.) Use this concept to explain other events that occur in a natural order in your industry.
<i>Explore</i> additional concepts pertaining to humans and other animals	Give examples of ways organisms adapt to their environment. As relating to industry, review the concepts of: <ul style="list-style-type: none"> • Aging • Immune system • Skin and Tissues • Blood and hemoglobin • Disease
<i>Compare/contrast</i> the differences between sexual and asexual reproduction	Determine instances when understanding the concepts of sexual reproduction are important for your industry. Highlight the effects of unsafe working practices on unborn fetuses or the dangers present for pregnant women working in industry.
<i>Show</i> a general understanding of the importance of health	Explore the cost of lost wages and worker's compensation in the past year due to health problems. Research the most common health problems among workers (workers with safe jobs; workers with most hazards to health, etc.).
<i>Investigate</i> the food cycle	Identify food chains, food webs, food pyramids. Show how changes to the food cycle affect the environment and humans. Name the food groups.
<i>Understand</i> nutrition and the body's need for a diet that provides vitamins and minerals	Show an understanding of body systems (circulatory, nervous, digestive, etc.) as they

	<p>relate to industry.</p> <p>Identify deficient vitamins and minerals among a particular population (American workers, workers in specific environments, workers who do not go outdoors, or those who always work outdoors) and the health risks associated with job types (office work, mining work, etc.).</p>
<p><i>Observe</i> health code/sanitation requirements</p>	<p>Research the development of health code and sanitation requirements, including OSHA.</p> <p>Compare/contrast workplaces of 1850, 1900, 1950, and 2000 regarding health and safety.</p> <p>Discuss the most common workplace violations of health requirements and present in a graphic format (e.g., maps, charts).</p> <p>Discuss potential effects of ignoring health requirements.</p> <p>After identifying workplace hazards, create several plans to treat the problem. Debate the benefits of each.</p> <p>To avoid the threat of employers choosing ineffective means of ensuring safety on the job, locate MSDS sheets, first aid stations, personal protective equipment, worker's compensation claims offices/paperwork, etc.</p> <p>Using workplace materials*, locate the section on safety regulations. Ask students to rank the items. Debate the importance of each. Determine the threat of ignoring regulations. Research which regulations are often disregarded.</p> <p>Explore proactive measures students can take to extend their health.</p> <p>Understand the importance of mental health in addition to physical health.</p>
<p><i>Investigate/apply</i> principles of anatomy and physiology</p>	<p>As relating to your industry, explore issues relating to anatomy and physiology.</p>

	<p>Study the skeletal system--the bones of the arm, hand, and neck. Research carpal-tunnel syndrome.</p> <p>Identify the types of fractures and those most common to your line of work. Learn how to prevent falls.</p>
<i>Understand</i> basic principles of ecology	<p>Define ecology.</p> <p>Identify five major ways in which people interact with the environment, especially as relating to your industry.</p> <p>Discuss the effectiveness of the media as compared with pro-science groups (such as Greenpeace) on the public's awareness of important environmental issues.</p> <p>Identify any areas of concern regarding waste/waste management in your industry.</p> <p>Show the difference between a niche, community, habitat, and ecosystem.</p> <p>Give examples of herbivores, carnivores, and omnivores. How does your industry use and serve each group?</p> <p>Understand predators' effects on food chains. Identify predators of industry.</p> <p>Explain the process of decomposition and decay. How does industry interfere with or interrupt these processes?</p>
<i>State</i> the differences between viruses and bacteria	<p>Define viruses and bacteria. Explore viral and bacterial threats present in the workplace. How can they be prevented? How can they be treated?</p> <p>State the benefits of viruses and bacteria.</p> <p>Explain the recent increased resistance to drugs and antibiotics.</p>
<i>Understand</i> basic concepts relating to plants	<p>Describe the interchange of oxygen and carbon dioxide between plants. Contrast it with the way humans exchange oxygen and carbon dioxide.</p>

	<p>As relating to industry, review the concepts of:</p> <ul style="list-style-type: none"> • Fertilization • Parts of a plant and functions of each • Effects of temperature on plants • Need for water and light • Photosynthesis
EARTH SCIENCE	
<p><i>Recognize earth's position in the universe</i></p>	<p>As relating to your industry, identify relevant topics regarding:</p> <ul style="list-style-type: none"> • Asteroids • Comets • Stars • Galaxies <p>Identify the planets in the solar system. Compare and contrast earth with other planets.</p> <p>Create a model showing the relative size of earth within our solar system. Use mathematical relationships to make sure the scale is correct (earth is the size of ____, so the sun should be the size of ____).</p> <p>How do the phases of the moon and sun affect the hemispheres?</p>
<p><i>Investigate the history of the earth</i></p>	<p>Identify geological, chemical, and other methods of determining the age of an object.</p> <p>Demonstrate that fossils and rocks are indicators of previous eras.</p> <p>As a class, create a timeline indicating the age of the earth. Include the various ages (Ice Age, etc.) and the length of each. Make sure the timeline is drawn to scale. Assign each age to a group and research the following:</p> <ul style="list-style-type: none"> • Weather • Major events at beginning and end of age • Organisms living during this time • Factors that made the age unique
<p><i>Investigate physical characteristics of the earth</i></p>	<p>Label/model the components of the earth.</p>

	<p>Understand, at a level of complexity appropriate to your industry and to students' ability levels, basic principles of gravity.</p> <p>Solve problems of longitude, latitude, and time zones.</p> <p>Create a model of the ratio of land and water on earth.</p>
<i>Investigate</i> physical forces acting on the earth	<p>Examine erosion and depletion of nonrenewable resources.</p> <p>Identify natural disasters such as hurricanes and earthquakes. Research the effects of a past disaster on a specific industry.</p> <p>Understand, at a level of complexity appropriate to your industry and to students' ability levels, basic principles of plate tectonics (the earth's surface is broken into large plates; movement of these plates over time causes earthquakes and other geologic activity).</p>
<i>Explain</i> the basic components of earth's rotation	<p>Understand that the earth spins on its axis at an angle of 23 ½ degrees. Identify the period of one complete rotation as a day; longer cycles of rotations identify the seasons.</p> <p>Discuss time zones.</p>
<i>Identify</i> the earth's atmosphere and its components	<p>Identify the main elements in the earth's atmosphere (nitrogen and oxygen).</p> <p>Identify layers of the atmosphere and ozone layer. Explain concepts of air pressure.</p>
<i>Understand</i> basic principles of the solar system	<p>Demonstrate how the sun strikes the earth at different angles depending on location.</p>
<i>Demonstrate</i> the relationship between climate and weather	<p>Identify the factors that create weather.</p> <p>Show how landscape features are affected by changes in climate or weather.</p> <p>Identify the greenhouse effect. How does industry</p>

	<p>contribute to it?</p> <p>Describe the relationship between altitude and weather.</p> <p>Understand that changes in the weather may be seen as fronts that are put in motion by the jet stream.</p> <p>Identify types of precipitation.</p> <p>Differentiate between types of clouds.</p> <p>Understand the effect of winds, wind speeds, and impacts on vegetation.</p>
<p><i>Learn and apply concepts relating to the oceans</i></p>	<p>Label the major oceans and seas. Determine the elements in ocean water (nearly all elements are present).</p> <p>Identify or draw the structural components of the ocean floor.</p> <p>Explain the relationship between the moon and the tides.</p> <p>Explore ways the ocean is used for power and business.</p>
<p><i>Investigate principles of water</i></p>	<p>Identify the parts of the water cycle and the effects of the processes involved.</p> <p>Define water's chemical properties:</p> <ul style="list-style-type: none"> • Water is the universal solvent • Water has a neutral pH of 7 • Chemically, water is one atom of oxygen bound to two atoms of hydrogen <p>Measure salinity. Which industries rely heavily on water?</p> <p>Define water's physical properties:</p> <ul style="list-style-type: none"> • Water is the only natural substance that exists as solid, liquid, and gas • Water's surface has a high density • Water has a high tolerance for heat (heat index)

	<ul style="list-style-type: none"> • Water's weight • Water as a coolant • Specific gravity
<i>Investigate conservation of physical and natural resources</i>	<p>As relating to your industry, discuss or debate the issues of:</p> <ul style="list-style-type: none"> • Allocation of resources • Recovering resources • Best/worst methods of using resources <p>Compare/contrast renewable and nonrenewable resources.</p> <p>Note the important developments in your industry regarding mineral, soil, water, and wildlife conservation.</p> <p>Discuss alternative sources of energy as relating to your industry.</p>
<i>Investigate issues regarding scientific technology</i>	<p>As relating to your industry, discuss the uses of technology. What are the newest developments? What effects does the technology have on our society? Political system? Discuss the role of economics on technology.</p>
<i>Apply science principles/laws to environmental issues</i>	<p>Discuss how humankind alters the earth and environment through pollution and the use of resources and technology.</p>

Crosswalk to SkillsUSA Criminal Justice

SkillsUSA, the co-curricular student organization for Trade and Industrial Education, provides many opportunities through its program of work for students to apply the knowledge, skills, and processes learned in a variety of courses. A correlation of the Criminal Justice technical contest to selected tasks/competencies in Arkansas' Criminal Justice courses is provided as a supplement to this framework.

Purpose

To evaluate each contestant's preparation for employment and recognize outstanding students for excellence and professionalism in the field of law enforcement and/or public security.

Clothing Requirement

Official light blue SkillsUSA work shirt, navy pants, and black or brown leather work shoes. Skirts and high-heeled shoes are not permitted. To purchase official work clothes, contact Midwest Trophy Manufacturing Co. Inc. by calling 1-800-324-5996 or order online at: <http://www.mwtrophy.com/vica/index.html>.

Eligibility

Open to active SkillsUSA members enrolled in programs with law enforcement and/or public security as the occupational objective.

Equipment and Materials

All necessary materials for the contest

- Supplied by the contestant:
 - Small pocket notebook for field notes
 - Belt and training holster
 - 25' tape measure
 - Pens and pencils (two each)
 - Handcuffs

- Handcuff case
- Flashlight
- Fingerprint kit

Scope of the Contest

- Contestants will demonstrate their ability to perform jobs or skills selected from the following list of competencies as determined by the SkillsUSA Championships technical committee. Committee membership includes: Boone County (Mo.) Sheriff’s Department, Olathe (Kan.) Police Department, and the Platte County (Mo.) Sheriff’s Office.

- Explain constitutional law, criminal law, laws of arrest, rules of evidence, search and seizure, juvenile law, surcharges, and civil and criminal liabilities.
- Describe and demonstrate patrol procedures.
- Demonstrate defensive techniques.
- Direct and control traffic.
- Operate a police vehicle safely.
- Investigate traffic accidents.
- Discuss the legal aspects of firearms. *Demon-170 SkillsUSA Championships Technical Standards (2002–2004)*

Written test

SUBTOTAL

Clothing Penalty (minus 0 to 5 percent of total points)

TOTAL

Note: An Oral Professional Assessment will be included. Points to be determined by national technical committee. *Sponsored by Goodheart-Willcox Publisher 171*

Arkansas' All Aspects of Industry

Defining “All Aspects”

All aspects of an industry include, with respect to a particular industry that a student is preparing to enter, planning, management, finance, technical and production skills, underlying principles of technology, labor and community issues, health and safety, and environmental issues related to that industry. Planning is examined at the level of both an individual business and the overall industry. Planning elements might include:

- Developing strategic plans—mission, vision, goals, objectives, and/or a plan of action
- Working with planning tools such as surveys, market research, and competitive analysis
- Anticipating needs for staffing and major purchases of equipment and supplies
- Developing plans for training and upgrading of staff
- Forecasting market trends
- Developing business plans for entrepreneurial ventures

Management addresses methods typically used to manage enterprises over time within the industry as well as methods for expanding and diversifying workers' tasks and broadening worker involvement in decisions. Key elements of management might include:

- Using an organization chart to explain how a corporate chain of command works
- Providing input for strategic plans and communicating the company's vision and mission statements
- Leading employees in carrying out strategic plans and action plans
- Evaluating employee performance
- Anticipating technology and other major purchasing needs
- Ensuring equity and access for employees
- Resolving conflicts
- Developing job descriptions and written policies/procedures
- Identifying recruitment procedures, training opportunities, methods of evaluation, and retention strategies
- Working with professional associations and community outreach efforts

Finance examines ongoing accounting and financial decisions and different methods for raising capital to start or expand enterprises. Finance functions might include:

- Developing budgets
- Preparing financial statements
- Analyzing and managing financial transactions and records
- Implementing payroll procedures
- Determining and paying taxes
- Identifying indirect wage costs (benefits, FICA, insurance, worker's compensation)
- Making loans and granting credit to customers
- Developing graphs and charts related to company finances
- Identifying and implementing methods of sustaining profitability of a business
- Managing 401K plans
- Identifying sources of capital

Technical and production skills cover specific production techniques and alternative methods for organizing the production work, including methods that diversify and rotate workers' jobs.

Technical and production skills that an employee should have to succeed in a business or industry might include:

- Developing and upgrading job-specific skills
- Using troubleshooting and problem-solving techniques
- Analyzing information to make decisions
- Identifying and implementing quality assurance techniques
- Employing communication skills such as writing, listening, speaking, and reading
- Participating in team efforts
- Implementing projects and new techniques
- Demonstrating basic computer skills; employing time-management techniques in completing projects and assigned tasks
- Demonstrating ethical behavior and work ethic

Underlying principles of technology provide an integrated study across the curriculum of the mathematical, scientific, social, and economic principles that underlie the industry's technology.

Principles of technology that an employee should know might be demonstrated by:

- Exhibiting proficiency in mathematical and scientific functions related to new and emerging technologies
- Continuously upgrading job skills needed to implement new technologies
- Participating in industry certification programs
- Cross-training to enhance one's value to the organization and to enhance job promotion opportunities
- Understanding and adhering to ethical issues related to technologies

Labor issues examine worker rights and responsibilities, labor unions and labor history, and methods for expanding workers' roles. Labor issues might include:

- Understanding and implementing worker rights and responsibilities
- Working with labor unions
- Keeping abreast of local, state, and federal legislation affecting employee and employer rights and responsibilities
- Negotiating and settling worker disputes
- Identifying certification requirements for specific jobs
- Analyzing the impact of labor agreements on business operations

Community issues explore the impact of the industry on the community and the community's impact on and involvement with the industry. Concepts of business and community relations might include:

- Developing and working with community outreach projects
- Participating on advisory committees and community organizations
- Working with professional associations
- Developing and implementing public relations plans
- Participating in community service projects

Health, safety, and environmental issues examine these concepts in relation to both the workers and the larger community. Concepts related to health, safety, and the environment might include:

- Identifying and implementing federal, state, and local regulations related to the health and safety of employees
- Understanding and strictly adhering to federal, state, and local environmental regulations related to the business
- Identifying job-specific health hazards and safety issues
- Identifying and implementing basic safety and first aid training techniques for emergencies such as personal illness or injury, tornadoes, fires, nuclear accidents, floods, and incidences of employee-rage or violent behavior
- Communicating safety regulations and plans to employees
- Working with selected community groups to implement safety programs

Criminal Justice Framework Cross Reference

Law Enforcement Fundamentals

- Unit 1 Criminal Justice System
- Unit 2 Criminal Justice Professions
- Unit 3 Communicating with Others
- Unit 4 Interpreting Criminal and Civil Laws
- Unit 5 Legal Use of Force
- Unit 6 VICA Student Organization

Intro. to Criminal Justice

- Duty(s): A
- Duty(s):
- Duty(s):
- Duty(s):
- Duty(s):
- Duty(s):

Patrol Procedures

- Unit 1 Responding to Emergencies
- Unit 2 Controlling Traffic
- Unit 3 Performing Patrol Procedures
- Unit 4 VICA Student Organization

Law Enforcement I

- Duty(s): J
- Duty(s): K
- Duty(s): L
- Duty(s):

Criminal Investigation

- Unit 1 Narcotics and Dangerous Laws
- Unit 2 Investigating Crimes
- Unit 3 Search, Seizure, and Evidence
- Unit 4 Arresting Suspects
- Unit 5 VICA Student Organization

Law Enforcement II

- Duty(s):
- Duty(s): S
- Duty(s): T
- Duty(s): U
- Duty(s):

Criminal Law

- Unit 1 Custody Procedures
- Unit 2 Court System
- Unit 3 Juvenile Justice System
- Unit 4 Preventing Crime
- Unit 5 VICA Student Organization

Criminal Law

- Duty(s):
- Duty(s):
- Duty(s): X
- Duty(s):
- Duty(s):